U. S. TREASURY DEPARTMENT

BUREAU OF INTERNAL REVENUE

AN ANALYSIS OF THE EFFECTS OF THE PROCESSING TAXES LEVIED UNDER THE AGRICULTURAL ADJUSTMENT ACT

Prepared by the Bureau of Agricultural Economics
United States Department of Agriculture

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LETTER OF TRANSMITTAL

United States Department of Agriculture,
Bureau of Agricultural Economics,
Washington, May 10, 1937.

The honorable the Secretary of Agriculture.

Dear Mr. Secretary: There is transmitted herewith "An Analysis of the Effects of the Processing Taxes Levied Under the Agricultural Adjustment Act." This study, prepared in response to your request, represents an attempt to determine the incidence of the processing taxes levied under the provisions of the Agricultural Adjustment Act on hogs, wheat, rye, cotton, tobacco, corn, rice, peanuts, and sugar.

Sincerely yours,

A. G. Black, *Chief of Bureau.*

Enclosure.

CONTENTS

AN ANALYSIS OF THE EFFECTS OF THE PROCESSING TAXES LEVIED UNDER THE AGRICULTURAL ADJUSTMENT ACT

(Prepared in the Bureau of Agricultural Economics) [1]

INTRODUCTION

This analysis is designed to determine the incidence of the processing taxes levied under the provisions of the Agricultural Adjustment Act on hogs, wheat, rye, cotton, tobacco, corn, rice, peanuts, and sugar. As not all of the facts necessary for a complete analysis are available, it is possible to show only some of the effects of the processing taxes, and in some instances the conclusions are quite tentative and subject to modification on the basis of new facts that may be developed.

The collection and use of processing taxes as conceived under the Agricultural Adjustment Act involve two separate and distinct questions: (1) The effects on processors, distributors, consumers, and producers of the collection of processing taxes and the distribution of funds so obtained in the form of "benefit payments" to farmers, and (2) the effects on these same groups of the production-adjustment programs in which farmers participated upon the partial inducement afforded by the benefit payments. Processing taxes might be collected, and benefit payments made, without any resort to production adjustment; and adjustment programs might be conducted and financed without resort to processing taxes.

This report deals only with the first of the above questions, which includes (*a*) the extent to which the processing taxes were absorbed by processors and distributors as a whole, or paid by consumers as an addition to prices that they would have paid had there been no processing taxes, or by producers through a reduction in prices below what they would have been if the program had been financed by means other than the processing tax; and (*b*) the extent to which "rental and benefit payments" to producers affected their income, aside from any effects of production adjustment upon farm prices and income. Therefore, the analysis is not intended or adapted for use as an appraisal of the effects, advantages, or disadvantages of the production-adjustment programs as a whole.

It is to be noted that an inquiry such as this requires statistical determination of the complex economic forces which surround the production and sale of processed goods. These forces, of course, include the effect of the tax itself, and one of the requirements of an

[1] This study was prepared by members of the staff of the Bureau of Agricultural Economics under the direction of F. L. Thomsen, principal agricultural economist. Economists primarily responsible for the various sections follow: Preston Richards, hogs; Robert E. Post, wheat and rye; Maurice R. Cooper, cotton; F. J. Hosking (resigned) and Malcolm Clough, corn and rice; Ernest W. Grove, tobacco; Gustave Burmeister, peanuts; F. L. Thomsen and Gustave Burmeister, sugar. The Bureau of Agricultural Economics has been making studies of the processing taxes on some of the commodities since these taxes were originally levied. This report is based to some extent on these earlier studies. Acknowledgment is made of the contributions of several present and former members of the Bureau staff, including Frederick V. Waugh, E. J. Working, O. C. Stine, Myer Lynsky, C. A. Burmeister, and G. B. Thorne.

adequate analysis is that an estimate be made of the prices which would have obtained in the absence of the tax. The problem is thus quite different from the simpler inquiry to determine the extent to which a particular processor bore the burden of the tax imposed under the Agricultural Adjustment Act. Such an inquiry ordinarily can be answered by reference to the books and records of the taxpayer.

The findings reported in this study, however, have an indirect bearing on the relation of the tax to an individual processor, distributor, producer, or consumer. These findings show trends in prices paid to producers and charged to distributors and consumers as well as gross margins of processors as a group. This analysis shows the interplay of market forces within which individuals operated during the period of the processing tax. On the other hand, a showing of an individual's operating margin, the relation of the tax to it, and his returns over a given period would have to be determined by examination of his books and records covering all pertinent phases of his business operations.

In this study, which is concerned with the effects of the processing tax over an entire industry, available data consist of statistical summaries including average market prices. In many cases it is difficult to obtain data sufficiently detailed and of sufficient accuracy to permit precise conclusions for the industry as a whole. Here, again, the situation differs from that arising with respect to the operations of individuals. The latter involve, typically, an investigation which utilizes specific data from the books and records of individual operators.

METHOD OF ANALYSIS

Except in those instances in which the peculiar characteristics of the commodity necessitated a somewhat different approach, the method of determining the incidence of the processing taxes, that is, determining who really bore the burden of these taxes, was as follows:

(1) The margins obtained by processors (that is, the spread between the price paid for the raw product and the price received for the finished product) were computed, covering periods before, during, and after that in which the tax was effective. If, when the tax was initiated, the margin was increased by an amount sufficient to cover the tax, and decreased by a corresponding amount following removal of the tax, there is reasonable justification for concluding, in the absence of material changes in processing costs or competitive conditions, that the tax was shifted by the processors to consumers or to producers or to both or possibly shifted to distributors who might have absorbed a part of the tax. In this connection, it is important to consider the anticipation by processors of the levying of the tax in advance of the date upon which the tax was to become effective, and a similar anticipation of the removal of the tax before the decision of the Supreme Court on January 6, 1936.

(2) The same type of analysis was made of the spreads or margins taken by distributors of the finished products, insofar as data were available.

(3) If processors and distributors shifted the tax, it may have been to consumers in the form of a higher price for the finished product, or to producers in the form of a lower price for the raw materials purchased by the processors. The method of determining what part, if any, of the tax was passed on to consumers or deducted from the price

which otherwise would have been paid to producers, in the relatively short period in which this tax was in effect, depends upon certain economic characteristics of the commodity, particuarly the elasticities of domestic and foreign demand.

The more important commodities upon which processing taxes were levied enter into international trade. If, following the application of a processing tax to such commodities, an attempt is made to pass the tax on to domestic consumers in the form of a higher retail price, domestic consumption presumably would be decreased. The extent of this decrease in domestic (United States) consumption would depend not only upon the elasticity of domestic demand (that is, the relative change in the quantity consumed in response to any given change in price), but also upon the elasticity of foreign demand. If the change in domestic consumption resulting from the rise in prices is relatively small (that is, if the domestic demand is inelastic), and if an amount equal to this decrease in consumption can be added to exports from the United States without having much effect upon the export price of the commodity (that is, if the export demand is elastic), a large part of the tax can be passed on to the consumer, the exact amount depending upon these elasticities of demand. If, on the other hand, the domestic demand is elastic, while the export demand is inelastic, the attempt to increase prices paid by domestic consumers would be met with a marked decrease in consumption in the United States, and the necessary increase in exports to offset this smaller domestic consumption could be obtained only by drastically reducing the price of the commodity. After the imposition of the tax, a new balance would be reached between domestic consumption and exports, with domestic prices higher than export prices by the amount of the tax. The new domestic price so established would be at some point between the price that would have obtained without the tax and such price plus the tax.

If the tax were in effect for a period of time sufficient to permit adjustments in production by both domestic and foreign producers, the incidence of the tax would depend also upon the elasticity of supply in both the domestic and foreign producing countries. For the relatively short period in which these taxes were in effect, however, this phase of the question may be ignored.

(4) In some cases, the amounts received by producers for commodities may be looked upon as a residual of the amount paid by domestic consumers and foreign buyers minus the margins taken for processing and distributing. For example, if it were found that domestic consumers and foreign buyers together would not pay any greater total amount for the commodity after the imposition of the tax than they would if there had been no tax, and if the margins taken by processors and distributors were increased by the amount of the tax, then it follows that the market prices received by producers of the commodity were reduced below what they otherwise would have been by the amount of the tax. Of course, since the amounts collected as taxes were paid to producers in the form of benefit payments, the latter may be viewed as a part of the total price received by the producers of the commodity.

(5) In other cases, the analysis may be facilitated by following the consideration of processors' and distributors' margins with an analysis of the effects of the tax on the basic price level for the raw commodity.

In this event, the price paid by the domestic consumer may be looked upon as the residual rather than the price received by the domestic producer. If it is found that the basic price of the commodity was not reduced by the tax, and that the margins of processors and distributors have been increased by an amount sufficient to cover the tax, it follows that the tax has been added to the domestic retail price paid by consumers. This type of analysis is applicable, for example, in connection with a commodity like corn, of which the amounts used in processing represent such a small proportion of the total production that the basic price is not appreciably affected by the consumption of or demand for the processed products.

Any analysis of tax incidence is based fundamentally upon an appraisal of what prices and margins would have been in the absence of the tax. This determination involves some of the most complex considerations in the field of economics. In analyzing quantitatively these complex forces, the investigator has available a body of data that is only partially adequate to the task. Moreover, the analysis must be based upon a study of past relationships between prices and specific price-making forces, which may be subject to change after the tax is put into effect. It must be recognized, therefore, that quantitative conclusions as to who paid the processing tax cannot be in terms of exactly so many dollars and cents. This general limitation applies to all statistical analyses, as well as to most accounting procedures. But this inability of economic analysis to account for every dollar involved makes the analysis no less significant. The results of the analysis show who, by and large, bore the levy, and also help to suggest the extent to which the costs and the benefits of a broad public program were distributed in accordance with the policy that gave rise to it.

In this study, multiple correlation analyses have been made to determine the effects of price changes on consumption, and for other purposes. In some cases these analyses may not include a sufficient number of observations, or may not have a sufficient degree of determinateness because of correlation among the independent variables, to constitute conclusive proof of the existence of the apparent relationships depicted in the charts. In such cases, the regression lines may be taken merely as quantitative expressions of logical hypotheses, definite statistical proof of which is lacking. These remarks, of course, do not have reference to any of the analyses relating to margins of processors and distributors, which are not based on correlation technique.

Bibliographies relating to the subject matter of this study have been issued by the Bureau of Agricultural Economics.[2]

GENERAL SUMMARY AND CONCLUSIONS

It is difficult to abstract the conclusions regarding the incidence of the processing taxes from the basic facts and analyses used in their formulation, partly because of the qualifications which are inherent in the methods of arriving at the conclusions. In general, however, the findings are as follows:

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[2] Agricultural Economics Bibliographies (mimeographed):
No. 14. Factors affecting prices; a selected bibliography, including some references on the theory and practice of price analysis. March 1926.
No. 48. Price analysis; selected references on supply and demand curves and related subjects, January 1928 to June 1933. September 1933.
No. 58. Price studies of the U. S. Department of Agriculture showing demand-price, supply-price, and price-production relationships. October 1935.
No. 68. Incidence of the processing taxes under the A. A. A.; a selected list of references. January 1937.

EFFECTS ON PROCESSORS

There is little or no evidence to indicate that the processors of any of the commodities upon which the processing taxes were levied bore any appreciable proportion of these taxes, with the possible exception of certain corn and tobacco products. In most cases, the evidence seems to be conclusive that the tax was passed on to consumers in the form of higher prices, or was taken from the price which otherwise would have been paid for the raw material, or was shifted partly in each of these directions.

The evidence is less conclusive with respect to the incidence of the tobacco processing tax than in the case of the other commodities, because of the lag in time between purchase and sale of tobacco, the relative insignificance of the processing taxes compare with prices that consumers pay for tobacco products, and the unusual competitive conditions existing in the tobacco industry immediately prior to and during the effective period of the processing taxes.

In the case of corn, conditions in the several processing industries preclude a brief summary of the incidence of the tax on this commodity.

As indicated in the respective commodity charts showing margins obtained by processors of hogs, wheat, rye, cotton, some tobacco products, rice, peanuts, and sugar, these margins increased either immediately before or at the time of the imposition of the taxes by amounts approximately equivalent to or greater than the respective taxes, and decreased by like amounts upon removal of the taxes. Although there are some apparent discrepancies, most of these may be explained logically on the basis of conditions existing at the time.

The reduced domestic consumption of those commodities in which the taxes were passed on to consumers no doubt affected slightly the gross income of the processors, by reducing their volume of business. The effects which any tendency toward reduced volume may have had on profits cannot be definitely determined without detailed analyses of fixed and variable costs in these industries. The possible influence of the tax upon the volume handled by processors varied widely as between commodities, but in no case is it likely that it was great. As indicated above, the influence here referred to is aside from the effect of the production control itself on volume handled by processors.

EFFECTS ON DISTRIBUTORS

The data available for the computation of margins of distributors are less satisfactory than those used for determining processors' margins, but such comparisons as have been possible indicate in most cases that retailers and other dealers between the processors and the consumers did not absorb any appreciable part of the processing taxes. Such comparisons were made for hog products, flour, cotton textiles, tobacco products, rice, peanuts, and sugar. In each case, the spreads between wholesale and retail prices of the finished products seemed not to have been materially altered during the period in which the processing taxes were in effect, except in some instances where other explanations of the changes in spread are suggested.

As in the case of processors, distributors of some of the finished products experienced a slight curtailment in volume to the extent that domestic consumption was inhibited by the tax.

EFFECTS ON CONSUMERS

The effects of the processing taxes on consumers varied widely among commodities.

As compared with other commodities, the domestic demand for hog products is relatively elastic, and the foreign demand under conditions of world trade prevailing during the last 3 years was almost completely inelastic. It appears, therefore, that the total sum of money paid by consumers in the United States for hog products was not appreciably greater under the prevailing conditions of hog supplies and consumers' purchasing power than they would have paid if the tax had not been in effect. This conclusion is substantiated by an analysis of retail prices of pork and lard covering a considerable period of years, including those during which the processing tax was in effect.

A very large part of the taxes on wheat, rye, and cotton apparently was passed on to consumers in the form of higher prices, since the domestic demand for each of these products is relatively inelastic, and because foreign demand for wheat and cotton is sufficiently elastic to absorb, without much price effect, the small increase in exports made necessary because of the decreased consumption in the United States.

The domestic demand for corn products has little effect upon the general level of corn prices, for a very large proportion of all corn is used for feed. Hence, any part of the tax that was not absorbed by processors had to be shifted to consumers by adjusting the output of corn products to what consumers would take at a price sufficiently high to absorb the tax.

In the case of tobacco, the consumers of cigarettes and chewing tobacco probably paid the tax on the tobacco contained in those products, the demand for which appears to be inelastic. The demand for cigars and smoking tobacco, however, appears to be relatively elastic; it is unlikely that consumers of these products bore all of the tax. It is possible that cigarette consumers bore part of the processing tax on these products in addition to the processing tax on tobacco going into cigarettes.

The incidence of the processing taxes on peanuts and rice is especially difficult to determine. In the case of peanuts, it appears that consumers paid the tax, since it was not absorbed by processors, and an analysis of farm prices of peanuts indicates that such prices were fully as high as would have been expected under prevailing conditions of supply and demand. The latter analysis, however, is by no means conclusive. There is no evidence that consumers paid any material part of the processing tax on rice, but the tax was not in effect during a period of time sufficiently long to permit drawing any definite conclusions on this point.

In the case of sugar, the control system definitely fixed the quantity of sugar made available to consumers during a given period. The processing tax, therefore, did not affect the supply of or demand for sugar in the retail markets, and hence did not affect retail prices and could not have been passed on to consumers.

EFFECTS ON PRODUCERS

Since the total amount paid for hog products by consumers apparently was no greater with the tax than it would have been if the tax had not been in effect, and since the processors and distributors

did not absorb any appreciable proportion of the tax, it follows that the prices received by producers for hogs were lower by the amount of the tax than they would have been if the tax had not been in effect and benefit payments had been made from sources other than processing tax revenues and if all other conditions had been the same. This conclusion is further substantiated by analyses of the changes in hog prices and changes in gross incomes of hog producers during a period of years prior to and during the period in which the processing taxes were in effect.

It has been noted that consumers did not pay any more for sugar because of the processing tax, and there is no evidence that distributors, refiners, or manufacturers of sugar absorbed the tax. It follows that the tax was borne by growers of sugar beets and of sugarcane in the United States, who in turn received benefit payments financed by the tax. Cuban producers, although apparently bearing the burden of the tax on sugar produced in that country, received the benefit of an offsetting reduction in the duty on sugar imports, and in this respect their status was not altered by the tax.

The facts with respect to rice are less conclusive because of the short time in which the tax was in effect, but the indications are that nearly all of the tax was borne by producers.

Since the joint margins of processors and distributors of the other commodities (wheat, rye, cotton, tobacco, and peanuts) appear to have been widened sufficiently to cover the respective processing taxes, and this increased margin or spread appears to have been brought about largely by raising prices to consumers, it follows that no large part of the processing taxes, if any, came out of the prices which otherwise would have been received by producers of these commodities. This conclusion is supported by various analyses which indicate that the prices of such commodities in the terminal markets or on the farms were not out of line with the prices that would be expected under the prevailing conditions of supply and demand. The same conclusion applies to the tax on corn, but for other reasons which were noted in the preceding section.

Of course, any part of the processing taxes that may have come out of the prices which otherwise would have been received by producers for any of these commodities went into a fund that was used for the purpose of making benefit payments to producers. Therefore, total incomes received by producers of commodities other than hogs, rice, and sugar were increased by amounts equal or nearly equal to the respective total amounts of the benefit payments made in connection with such commodities. The total amounts received by hog producers and by growers of sugar beets and cane, as groups, apparently were neither increased nor decreased greatly as a result of the tax and benefit payments together, exclusive of the effects of production or quota control. The latter conclusion also applies in large measure to the total amount received by rice producers as a group.

HOGS

EFFECTS OF THE HOG-PROCESSING TAX ON CONSUMERS

The effects of the processing tax upon prices paid by packers for live hogs and upon prices of hog products doubtless would have been somewhat different if exports of hog products had not been limited by import restrictions of various types in foreign countries. If there had

been no restriction on exports, the levying of a processing tax on hogs probably would have been accompanied by an increase in exports of hog products, since the tax was refunded on such exports. An increase in exports would have caused some decline in the price of hog products in foreign markets and some advance in domestic prices of hog products, assuming no other changes in supply and demand conditions. How much domestic and foreign prices would have been affected thereby would have depended upon the relative increase in supplies of hog products in foreign markets, the relative decrease in supplies in this country, and the elasticity of the demand for hog products in this and other countries.

Actually, however, with imports of hog products restricted in most foreign countries, the tax on domestic hog slaughter and the tax refund

RETAIL VALUE OF CONSUMPTION OF FEDERALLY INSPECTED HOG PRODUCTS AND NATIONAL INCOME, UNITED STATES, 1921 TO DATE

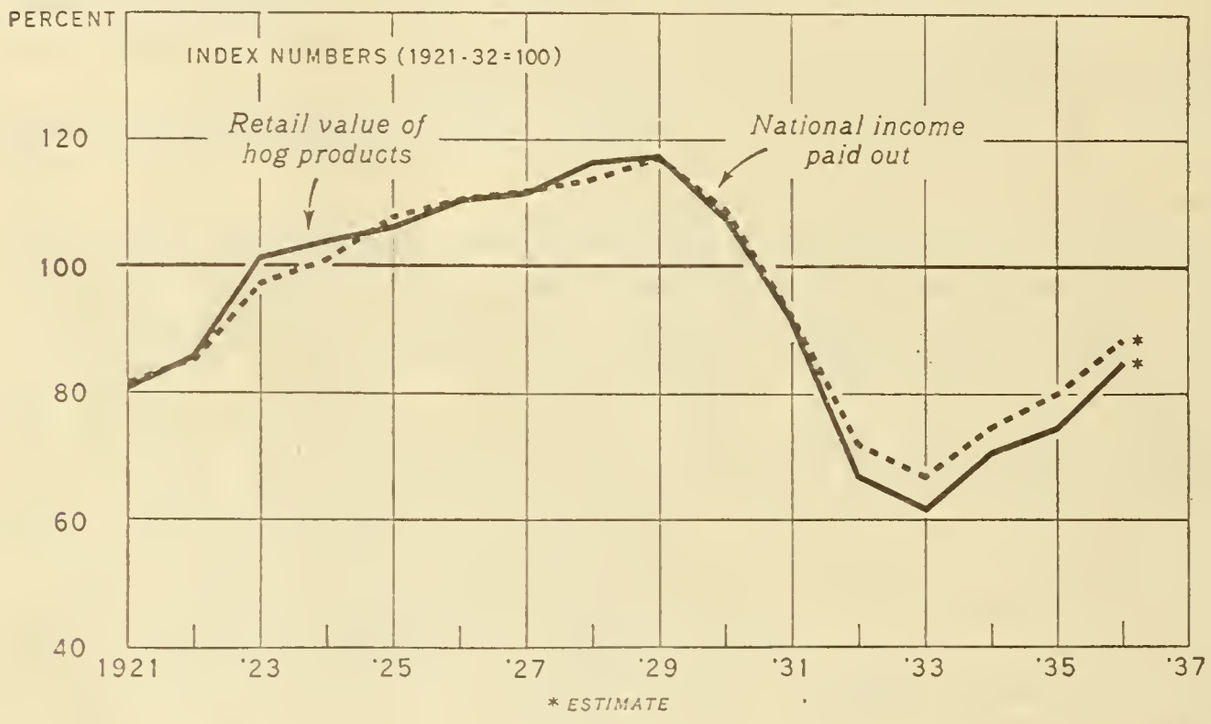


FIGURE 1.

on exports resulted in little or no diversion of hog products from the domestic market to foreign markets.

It appears that the processing tax on hogs had no material effect upon total consumer expenditures for hog products, and no direct effect upon retail prices of hog products. (As noted in the introduction, the effects of the production-adjustment programs as a whole are not considered in this analysis.) As shown in figure 1, changes in the aggregate consumer expenditures for federally inspected hog products in the United States throughout the period from 1921 to 1933 have been closely related to changes in national income. This close relationship continued to prevail throughout 1934 and 1935 when the processing tax was in effect. Apparently, therefore, consumers paid no more in total for hog products in the years when the tax was in effect than they would have paid had no tax been levied.

The aggregate value of hog products or of any other product consumed, is composed of two elements, the quantity purchased multiplied by the retail price. The volume of hog products consumed was not materially affected by the tax. In any given year the total volume

of hog products consumed, plus exports of hog products, is about equal to the volume of such products derived from domestic slaughter. Changes in the quantity of the carry-over or storage holdings of hog products are very small in relation to the volume produced. Since no material effect on exports resulted from the processing tax, the domestic consumption of hog products was determined largely by the volume of such products produced. In general, pigs born within any calendar year are marketed in the 12-month period beginning with October of the same year. Pigs once raised to market weights cannot be held on farms indefinitely without economic loss to the producer. There appears to be no way in which the levying of the processing tax could have affected directly and materially the number of hogs produced, although a minor indirect influence of the tax may have been to reduce average weights of hogs marketed.

Since the aggregate retail value of hog products consumed apparently was not changed by the tax, and the volume of hog products consumed was not materially affected, it follows that retail prices of hog products were little, if any, higher with the tax than they would have been without the tax. The relationship of retail prices of hog products to the volume of hog products consumed, and to the changes in national income from 1921 to 1936, is shown in figure 2, in which index numbers of retail prices are plotted against index numbers of consumption of federally inspected pork, including lard, and the deviations from the computed line of relationship are then plotted against index numbers of national income. This multiple relationship indicates that the retail price of hog products in both 1934 and 1935 was about the same as it would have been without the tax. In other words, if there had been no processing tax, the retail price of hog products would have been no different from what it actually was in both years when the tax was in effect.

Since the levying of the tax had no material effect upon consumer expenditures for hog products and upon retail prices of hog products, it would be expected that the removal of the tax would not alter the relation of retail prices of hog products to supplies and income. A preliminary analysis for the first 8 months of 1936, during most of which time the tax was not in effect, indicates that retail prices of hog products in that period were not affected directly by the removal of the tax. This conclusion is based largely upon the position of the observation for 1936 in figure 2. It will be observed that prices of hog products were about as high in the first 8 months of 1936 as would be expected in view of the prevailing supply and demand conditions. This indicates that removal of the tax on January 6 was not responsible for any major part of the drop in prices of hog products which started in October 1935, except insofar as it may have stimulated hog marketings temporarily in January 1936.

EFFECTS OF THE HOG-PROCESSING TAX ON PROCESSORS

The tax on hogs, like the other processing taxes, was levied against the first domestic processing of the commodity. In the case of hogs, therefore, the tax was paid initially by packers or processors slaughtering hogs. Since packers buy hogs and sell hog products, an analysis of the margin between prices paid for hogs and prices received by packers for hog products is necessary in order to determine the effects of the tax upon packers. This analysis shows that during the period

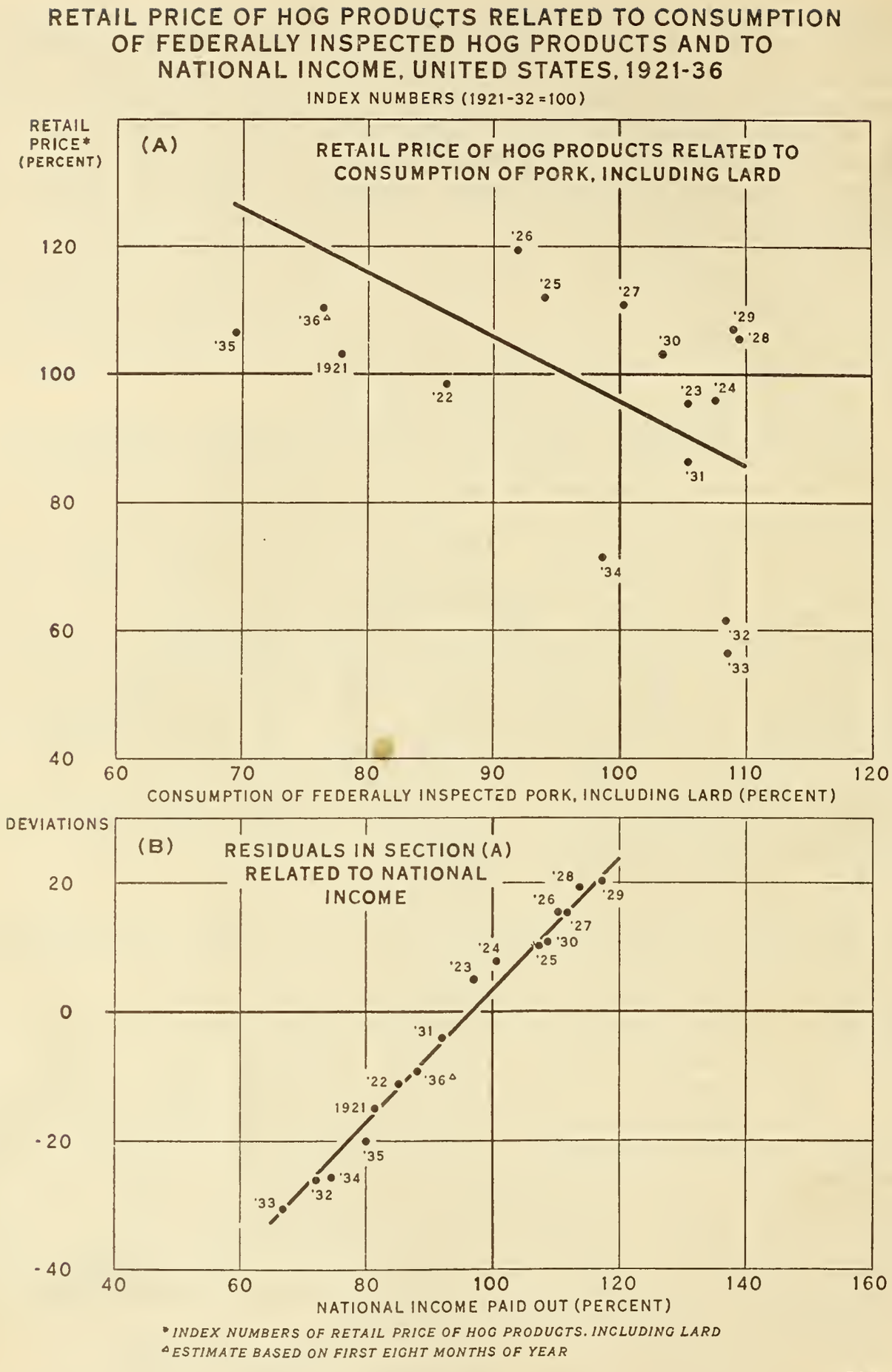


FIGURE 2.

when the tax was effective the margin or spread above mentioned was greater than it previously had been by about the amount of the tax. It appears, also, that when the tax was removed in early January of 1936 the margin between the price of hogs and the price of hog products declined to about the level that had prevailed during the period from May to October of 1933 before the tax was levied. During the

period when the tax was in effect, November 1933–December 1935, the spread minus the tax averaged 67 cents, compared with 65 cents which was the average spread for the 2 years, November 1931–October 1933, prior to the levying of the tax.

The changes in the price of hogs per 100 pounds at Chicago and in the wholesale value of hog products obtained from 100 pounds of hog, also at Chicago, are shown monthly in figure 3 for the period from November 1931 to July 1936. The spread between the price of hogs

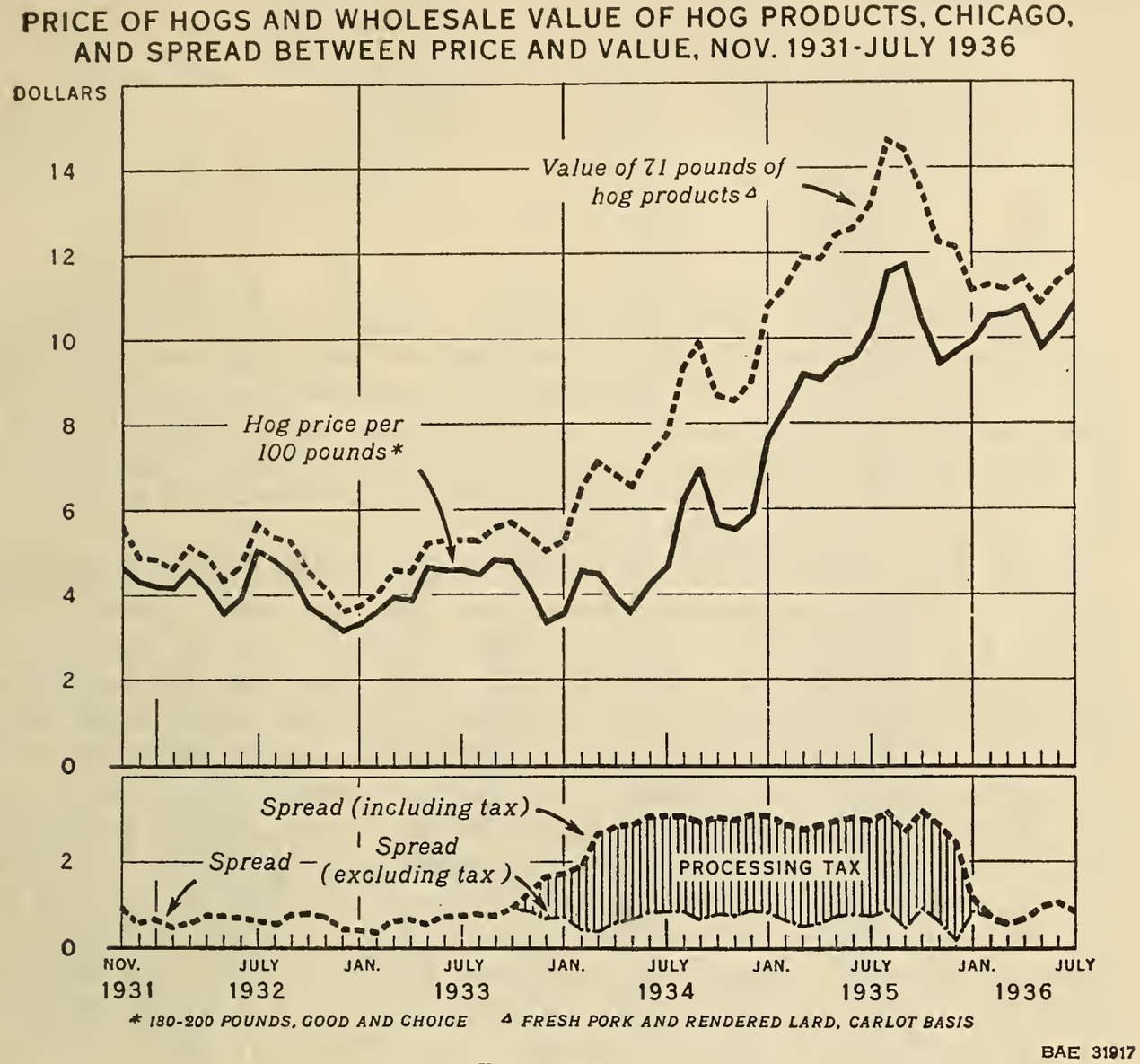


FIGURE 3.

and the value of hog products also is shown in this figure. The price of Good and Choice grade hogs weighing from 180 to 200 pounds was used, while the wholesale value of hog products represents the value of the different cuts of pork on a fresh basis, the value of rendered lard, and the value of inedible grease—in all about 71 pounds. Only such minor products as casings, blood, hair, and tankage have not been included in this composite figure. The spreads between the price of hogs and the wholesale value of hog products for periods before the processing tax went into effect, for periods during which the tax was in effect, and for a 6-month period after the tax was invalidated, are given below.[3]

[3] It should be noted that the price of hogs used represents quoted price paid by packers and shippers at Chicago for hogs at weights at the time of purchase. In most instances the processing tax was paid on the weight of hogs at time of slaughter. Since there is some shrinkage in weights of hogs from the time of purchase to the time of slaughter, the rate of tax on the purchase weight would be slightly lower than the effective rate.

Spread between price of hogs per 100 pounds, and wholesale value of 71 pounds of hog products at Chicago for specified periods [1]

Period	Spread	Spread less processing tax	Description
November 1931 to October 1933	$0.65		2-year period preceding the levying of processing tax.
May to September 1933	.71		5-month period preceding announcement of processing tax.
March 1934 to November 1935	2.95	$0.70	21-month period in which the processing tax was in effect at same rate.
November 1933 to December 1935	2.72	.67	Entire period in which processing tax was in effect.
November 1933 to June 1935	2.68	.68	Period in which processing tax was in effect and tax collections were being made.
February to July 1936	.81		6-month period following invalidation of processing tax.

[1] See appendix for data on prices from which these spreads were computed.

During the period from September 5, 1933, to April 30, 1934, in which the tax was initially levied and successively increased, the price of hogs and the value of hog products are shown by days (fig. 4). Daily prices and values are also shown for the period from October 1, 1935, to March 31, 1936. This represents the period just prior to and immediately following the voiding of the processing tax by the Supreme Court on January 6, 1936.

It will be observed that from May to September 1933 the monthly spread between the price of hogs and the wholesale value of hog products ranged from 57 to 79 cents. After it was announced on October 17, 1933, that a processing tax of 50 cents per 100 pounds on hogs was to become effective on November 5, 1933, the spread began to widen. Thus, by November 6, 1933, or shortly thereafter, the spread was increased sufficiently to permit packers to pay the tax and have a spread remaining about equal to the spread prevailing before the tax became effective. Immediately following December 1, 1933, when the tax was increased from 50 cents to $1 per 100 pounds, the margin between the price of hogs and the value of hog products widened further by about the amount of the tax increase. Similarly, the spread again widened after February 1, 1934, when the tax was increased to $1.50, and also after March 1, 1934, when the tax was increased to $2.25.

It should be noted in connection with the increase of the tax on February 1, 1934, and on March 1, 1934, that the spread between hog prices and the wholesale value of hog products did not widen until 4 or 5 days after the tax increase became effective. At these times when the tax was being increased, the Agricultural Adjustment Administration in cooperation with the Federal Surplus Relief Corporation bought a substantial proportion of the market supplies of hogs. These hogs were processed for relief purposes and on such slaughter the processing tax was refunded. During such time the market for hogs was not strictly on a commercial basis, since a large part of the regular supply was being removed from normal channels.

During the period from March 1934 to November 1935, when the rate of the hog-processing tax remained unchanged at $2.25 per 100 pounds, the margin between the price of hogs per 100 pounds and the wholesale value of hog products obtained from 100 pounds of hog was

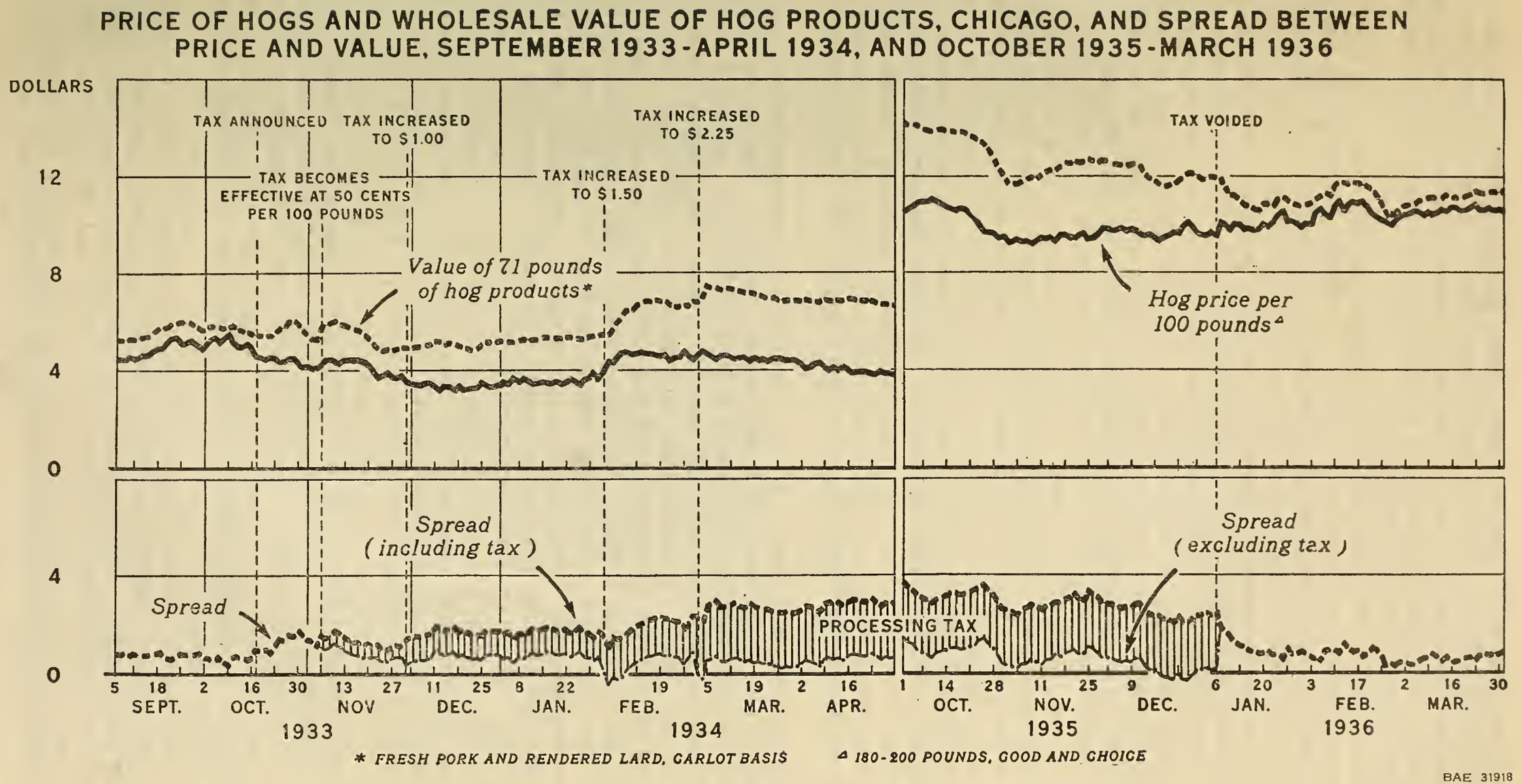

PRICE OF HOGS AND WHOLESALE VALUE OF HOG PRODUCTS, CHICAGO, AND SPREAD BETWEEN PRICE AND VALUE, SEPTEMBER 1933-APRIL 1934, AND OCTOBER 1935-MARCH 1936
DOLLARS
12
8
4
0
TAX ANNOUNCED
TAX INCREASED TO $1.00
TAX BECOMES EFFECTIVE AT 50 CENTS PER 100 POUNDS
TAX INCREASED TO $2.25
TAX INCREASED TO $1.50
TAX VOIDED
Value of 71 pounds of hog products*
Hog price per 100 pounds△
Spread (including tax)
Spread
Spread (excluding tax)
PROCESSING TAX
4
0
5 18 2 16 30 13 27 11 25 8 22 19 5 19 2 16 1 14 28 11 25 9 6 20 3 17 2 16 30
SEPT. OCT. NOV DEC. JAN. FEB. MAR. APR. OCT. NOV. DEC. JAN. FEB. MAR.
1933 1934 1935 1936
* FRESH PORK AND RENDERED LARD, CARLOT BASIS
△ 180-200 POUNDS, GOOD AND CHOICE
BAE 31918

FIGURE 4.

usually about $2.25 greater than it was in the period from May to October 1933 before the tax went into effect. Thus, it appears that throughout this period, except for brief intervals, the packers' margin per unit, excluding the tax, was as great as the margin had been prior to the time the tax was levied.

After the tax was declared unconstitutional by the United States Supreme Court on January 6, 1936, the margin between the price of hogs and the wholesale value of products declined, and by the end of January of 1936 it was reduced to about 70 cents. In other words, by late January or early February the spread between the market price of hogs and the value of hog products had been adjusted about to the level prevailing in the 6 months prior to the announcement of the tax—that is, May to October 1933—as well as to the level prevailing in the 2 years prior to the levying of the tax, November 1931 to October 1933. It should be recognized in passing that throughout the month of December 1935, especially in the last half of the month, the spread was unusually narrow. In fact, in the last half of December, after allowance was made for the tax there was a minus margin remaining for packers. Practically none of the packers were making processing tax payments at that time, pending the decision of the Court. The marked decrease in the spread in December may have represented a heightened anticipation on the part of many packers, following the granting of injunctions to certain processors, pending the decision of the Supreme Court in the *Rice Millers' case*, that the tax would be declared unconstitutional and that no unpaid taxes would have to be paid.

Comparisons of prices of hogs and values of hog products shown in figures 3 and 4 indicate that processors' margins widened when the hog-processing tax was originally levied and that it widened further when successive increases in the tax were made. In general, the spread increased to such an extent that the margin to processors, excluding the tax, remained approximately the same as the margin prevailing before the tax was levied. For the period May 1 to September 30, 1933, the margin averaged 71 cents; for the period March 1934 to November 1935 the margin excluding tax also averaged 70 cents. Thus it is obvious that in this latter period the margin, including the tax, was higher than in the former period by the amount of the tax, $2.25. It appears, also, that within 10 or 12 days after the voiding of the tax by the Supreme Court the spread between hog prices and the value of hog products reached a level very close to that which obtained prior to the initiation of the tax in 1933. In February, March, and April 1936 the average margin between the price of hogs and the wholesale value of hog products ranged from 56 cents to 70 cents, which was approximately equal to the margin prevailing in the 2 years before the tax was put into effect. In May and June the margin was somewhat greater than in the preceding 3 months, ranging from 98 cents to $1.08 on a monthly basis. In July, however, the margin declined to about 86 cents.

On the basis of prices of hogs and hog products at Chicago, it appears that the packers' margin for the processing of hogs per unit during the period in which the processing tax was in effect was higher than it otherwise would have been by about the amount of the tax. Hence, it can be concluded tentatively that the unit margins of processors of hogs were not affected materially by the processing tax.

The prices of hogs and hog products used in this analysis are for the Chicago market. Chicago has long been the leading hog market and the leading wholesale market for hog products. In general, however, prices of hogs and hog products at other markets follow Chicago prices closely; but it is possible that in isolated instances prices of hogs or of hog products or of both have not fluctuated in the same manner as have prices at Chicago.

It should also be mentioned that in this analysis hog prices have been compared with concurrent prices of hog products on a fresh basis. A considerable part of the hogs slaughtered is sold as cured pork and rendered lard. In the case of both cured pork and lard, periods of time varying from 3 weeks to 6 or 8 months intervene between the time the hog is slaughtered and the time the resulting hog products are sold to the retailer. Hence, the spread between concurrent prices of hogs and hog products does not necessarily indicate the profitableness of packing operations at any one time. Since prices of hogs and hog products were advancing in both 1934 and 1935, part of the products from hogs purchased in this period at a given price were usually sold some time later, after prices of both hog products and hogs had advanced. Thus, in these 2 years the comparison of prices of hogs and prices of fresh products tends to underestimate the actual margin between the prices paid by packers for hogs and the prices received by them for hog products.

Although the spread between the price of hogs and the price of hog products (fresh) as shown in figures 3 and 4 probably represents the best available measure of the packer margin, the effect of the tax is also apparent when prices of hogs are compared with the composite wholesale value of hog products, both fresh and cured. This comparison, together with the spread between the price of hogs and the value of hog products obtained from 100 pounds of hog, is given in figure 5 for the period 1932–36. In this case the composite value of hog products was computed from prices of cured products which are normally sold as such—bacon and hams—prices of fresh products (those which are usually sold fresh, such as loins) and prices of rendered lard. It will be observed in figure 5, as in figure 3, that the spread between the price of hogs and the wholesale value of hog products during the period from November 1933 to December 1935 was wider than it previously had been by about the amount of the processing tax. After the tax was invalidated in January 1936 the spread was reduced considerably, and from February to July 1936 it was not greatly different from what it had been in 1933 prior to the levying of the hog-processing tax.

Under the provisions of the Agricultural Adjustment Act, hog slaughter by producers or their agents for home consumption was not subject to the processing tax. In addition to the tax exemption on hogs slaughtered for home use, producers were permitted to slaughter small quantities for sale exempt from the tax.[4] Such data as are available relative to the changes in farm slaughter during recent years are not conclusive, but the effect of this tax exemption probably was to cause the slaughter of hogs by producers to be somewhat greater than it would have been without the processing tax. This undoubtedly caused the slaughter of hogs in commercial plants to be slightly smaller

[4] This regulation, approved Jan. 27, 1934, provided for the exemption from the tax on hog slaughter, the products of which did not exceed 300 pounds in any 1 year, but only in the case of producers whose total sales of hog products in any year did not exceed 1,000 pounds.

than it would have been if the tax had not been in effect. Also, the exemptions probably reduced the volume of hog products handled by retailers from what it would have been if there had been no tax. In this way the aggregate returns of processors and distributors for handling hogs and hog products probably were slightly lower because of the processing-tax exemption than they otherwise would have been, since margins per unit of processors and distributors do not vary in proportion to the changes in the volume of products processed and distributed.

EFFECTS OF THE HOG-PROCESSING TAX ON DISTRIBUTORS

Available data on retail and wholesale prices indicate that retailers of hog products were not affected directly by the hog-processing tax. In the period from November 1933 to early January 1936 the margin

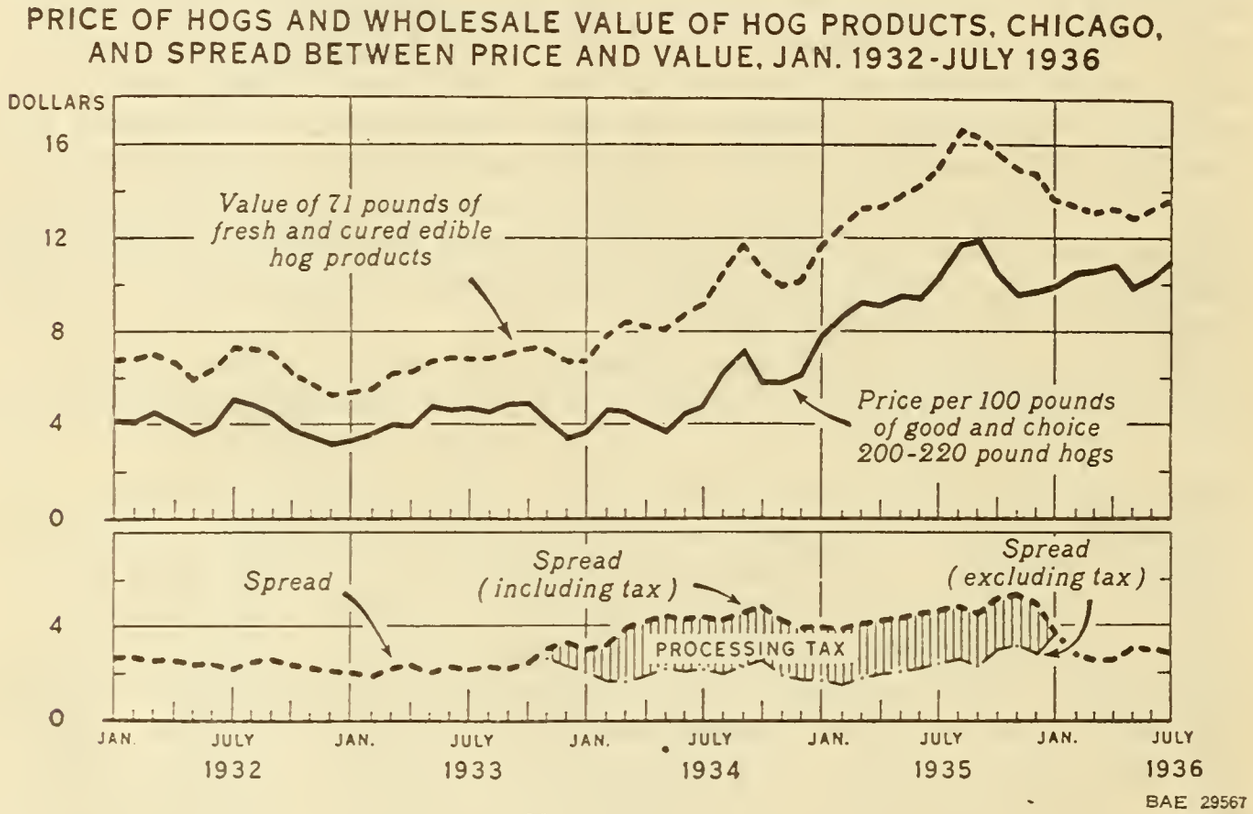


FIGURE 5.

between the wholesale value and the retail value of the principal hog products showed no tendency to decrease compared with the margin prevailing in the 3 years from 1930 to 1932, inclusive, when no tax was in effect. Since this margin represents the difference between the amount paid by the retailer to the packer or wholesaler and the amount received by the retailer from the consumer for the same products, it is a fairly adequate measure of the margin obtained by retailers on hog products.

Changes at New York in the wholesale and retail values of the principal hog products obtained from 100 pounds of hog are shown in figure 6 for the period from January 1924 to July 1936. As retail prices were not available on all hog products, the number of products selected for this comparison are fewer than the number of products used in computing the wholesale values shown in figures 3, 4, and 5. In the case of figure 6 the wholesale and retail values are for about 53 pounds of products obtained from 100 pounds of live hog, while the wholesale values shown in figures 3, 4, and 5, are for about 71 pounds of hog products. The value of the products used in figure 6 however,

represents about 80 to 85 percent of the total retail value of all edible hog products obtained from 100 pounds of hog. The comparison is made with wholesale and retail values at New York rather than Chicago because the data are available for a longer period at New York. Comparable retail values of hog products at Chicago, as well as wholesale values, are available beginning in 1932. For the shorter period for which the data are available at Chicago, substantially the same changes in margins may be observed as with the New York series.

As there are several products, notably bacon and hams, which the retailer does not buy and sell in a fresh state in large quantities, the retail and wholesale values of products shown in figure 6 are for products in the condition in which they are ordinarily purchased by

RETAIL AND WHOLESALE VALUES OF PRINCIPAL HOG PRODUCTS, NEW YORK, AND SPREAD BETWEEN THESE VALUES, JAN. 1924-JULY, 1936

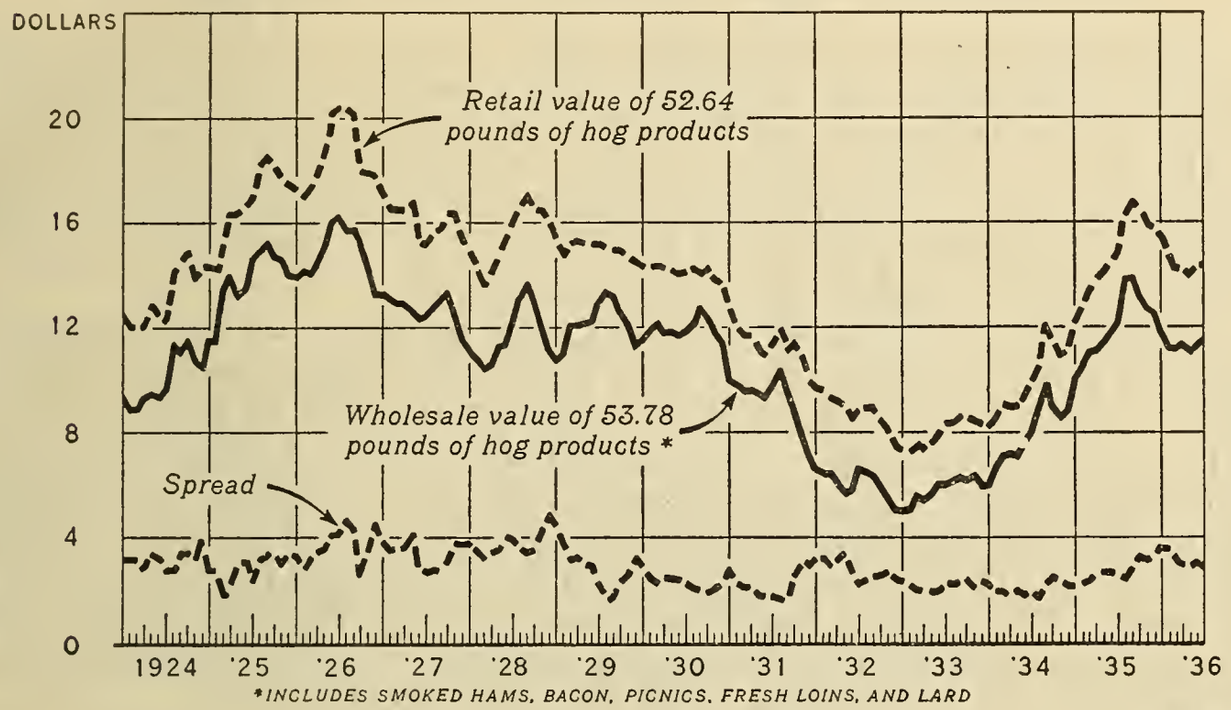


FIGURE 6.

retailers and consumers. This is somewhat different from the comparison of hog prices and wholesale product values shown in figures 3 and 4, in which the value of fresh pork and rendered lard was used to compare with the price of hogs. The data in figures 3, 4, 5, and 6, therefore, are not subject to direct comparison.

In the period from January 1930 to September 1933, before the hog-processing tax was announced or levied, the margin between the wholesale and retail values of the principal hog products at New York averaged $2.35. From November 1933 to December 1935, when the tax was in effect, the margin averaged $2.36. For the 14 months from November 1933 to December 1934 the average margin at New York was $2.07, slightly lower than that for the first 9 months of 1933. The margin for the similar series at Chicago, on the other hand, was slightly greater in the 14 months from November 1933 to December 1934 than in the first 9 months of 1933. In the first half of 1935 the margin at New York was $2.46. In the last half of 1935, when the tax was in effect but when tax payments were partly suspended, the average margin for retailers of hog products, based on prices at New York, was $2.93 for the principal products obtained from 100 pounds of hog.

In the first 7 months of 1936, in most of which no tax was in effect, the margin averaged $3.16.

The increase in the retail margin from 1933 and 1934 to 1936 probably was due largely to the higher costs involved in the retail trade generally, especially higher wages. It is also possible that because of the greatly reduced volume of hog products available in 1935 retailers were able to increase their unit margins in order to compensate partially for the smaller volume. The pressure of the large proportion of the overhead costs in the retail business which do not vary with volume may have contributed to this increased margin. Throughout the depression the retailers' margin averaged lower than in the pre-depression years. The average margin in late 1935 and early 1936, however had nearly returned to the level prevailing in 1928 and 1929.

EFFECTS OF THE HOG-PROCESSING TAX ON PRODUCERS

It has been indicated that retail prices of hog products in 1934 and 1935 were no higher than they would have been if the tax had not been in effect, that processors' margins were widened by about the amount of the tax, and that retailers' margins were not affected by the tax. It follows that live-hog prices were lower by about the amount of the processing tax than they would have been if no tax had been imposed but all other conditions had been the same.[5]

Although it is reasonably clear that the incidence of the processing tax was almost entirely upon hog producers, funds derived largely from the tax were used to make benefit payments to producers for adjusting hog production and corn acreage. Thus, the total income of hog producers as a group (income from sales of hogs, plus benefit payments) was approximately the same as it would have been, under the prevailing conditions of supply and demand, if the tax had not been imposed. It should be borne in mind, however, that the supply was substantially modified by the control program, a factor which affected the producer aside from the effects of the tax itself.

In the period 1924–35, the chief factors affecting the cash income to farmers from hogs were (1) the supply of hogs marketed, (2) national income, and (3) the export demand for hog products. The relationship of these three factors to the cash farm income from hogs is shown graphically in figure 7. It will be observed that as slaughter supplies of hogs increased, cash farm income from hogs tended to decrease. On the other hand, increases in national income and in the export demand for hog products were accompanied by increases in the cash farm income from hogs. In the years from 1924 to 1932 the producers' cash income from hogs was received only from commercial sales of hogs and hog products. In 1933 payments were made to producers for pigs and sows purchased under the emergency slaughter program. In both 1934 and 1935 payments were made to producers for adjusting corn and hog production. The processing tax on hogs was in effect in late 1933 and throughout 1934 and 1935. Thus, in considering the effects of the tax upon hog producers, in view of the relation between

[5] Since the immediate effect of the hog-processing tax apparently was to lower hog prices by about the amount of tax, the hog-corn price ratio also was lowered as a result of the tax. Because corn is the chief hog feed, a decrease in the hog-corn price ratio usually results in a decrease in the number of hogs produced. No consideration has been given in this analysis, however, to the effect of the tax upon the ratio, since the reduction in production resulting therefrom could not have been so large as that accomplished under the agricultural adjustment program for hogs in 1934, even though the latter was not fully effective.

tax receipts and benefit payments, such payments have been added to the cash farm income from hogs for the years 1933, 1934, and 1935.[6]

It appears from figure 7 that in both 1933 and 1934 the cash farm income from hogs, including benefit payments, was not greatly different from that which would be expected on the basis of the relationships prevailing in earlier years. In other words, when benefit payments are added to the cash income from hogs in these 2 years, such income appears to have been as large as it would have been without the processing tax and benefit payments. On the basis of the assumption that supplies of hogs and the demand for hog products would have been approximately the same with or without the tax, it appears that as far as the aggregate income of hog producers in 1933 and 1934 is concerned the depressing effect of the tax upon hog prices was offset by benefit payments.

In 1935 the cash farm income from hogs, including benefit payments, was slightly lower than indicated by the relationship of slaughter supplies of hogs, national income, export demand, and the cash farm income from hogs that prevailed in the years from 1924 to 1932.[7] Slaughter supplies of hogs in 1935, however, were much smaller than in all other post-war years, and consequently the relation between the supply of hogs and cash farm income from hogs in 1935 might not have been the same as the relation prevailing in earlier years. Whether or not the fact that the cash farm income from hogs in 1935 was lower than indicated by the relationship prevailing in earlier years was the result of the unusually small slaughter supplies of hogs or some other factor cannot be determined precisely. It is significant, however, that the retail price of hog products and the aggregate retail value of hog products consumed in 1935 were about as high as would have been expected in view of the relationship of the domestic consumption of hog products, national income, and retail prices of hog products that prevailed in earlier post-war years. (See fig. 2.)

On the basis of this analysis and those presented earlier it appears that the cash farm income from hogs, including benefit payments in the years 1933, 1934, and 1935, when the tax was in effect, was no greater than it would have been without the tax, assuming that supply and demand conditions would have been the same as they actually were. If benefit payments are excluded from the cash farm income from hogs, such income in 1934 and 1935 apparently was lower than it would have been if there had been no tax and supply and demand conditions had been the same. Thus it can be concluded that the incidence of the hog-processing tax was largely on producers of hogs, although the reduction in returns to most producers resulting from the tax was offset by benefit payments. This, of course, does not take into account the effects of the production-control programs upon supplies, and hence upon prices and incomes received by producers.

SUMMARY AND CONCLUSIONS

The evidence presented in the foregoing analysis indicates that the direct effect of the hog-processing tax was to cause prices received by hog producers to be lower than they otherwise would have been by

[6] The payments added are those actually made to producers in the respective years. Payments which in 1936 remained to be paid on 1935 contracts were not added, but this is more or less offset by the fact that the 3 programs would not have been paid for out of processing taxes until about the end of 1936 if collection had continued. Thus, the payments and tax collections for each year do not exactly correspond, but the discrepancies are not considered to be sufficiently large to affect materially the implications of the chart.

[7] This conclusion is subject to the limitations of the data as discussed in footnote 6.

approximately the amount of the tax. The evidence indicates, moreover, that processors of hogs and distributors and consumers of hog

CASH FARM INCOME FROM HOGS RELATED TO SLAUGHTER SUPPLIES OF HOGS, TO NATIONAL INCOME, AND TO EXPORT DEMAND FOR HOG PRODUCTS, 1924-35

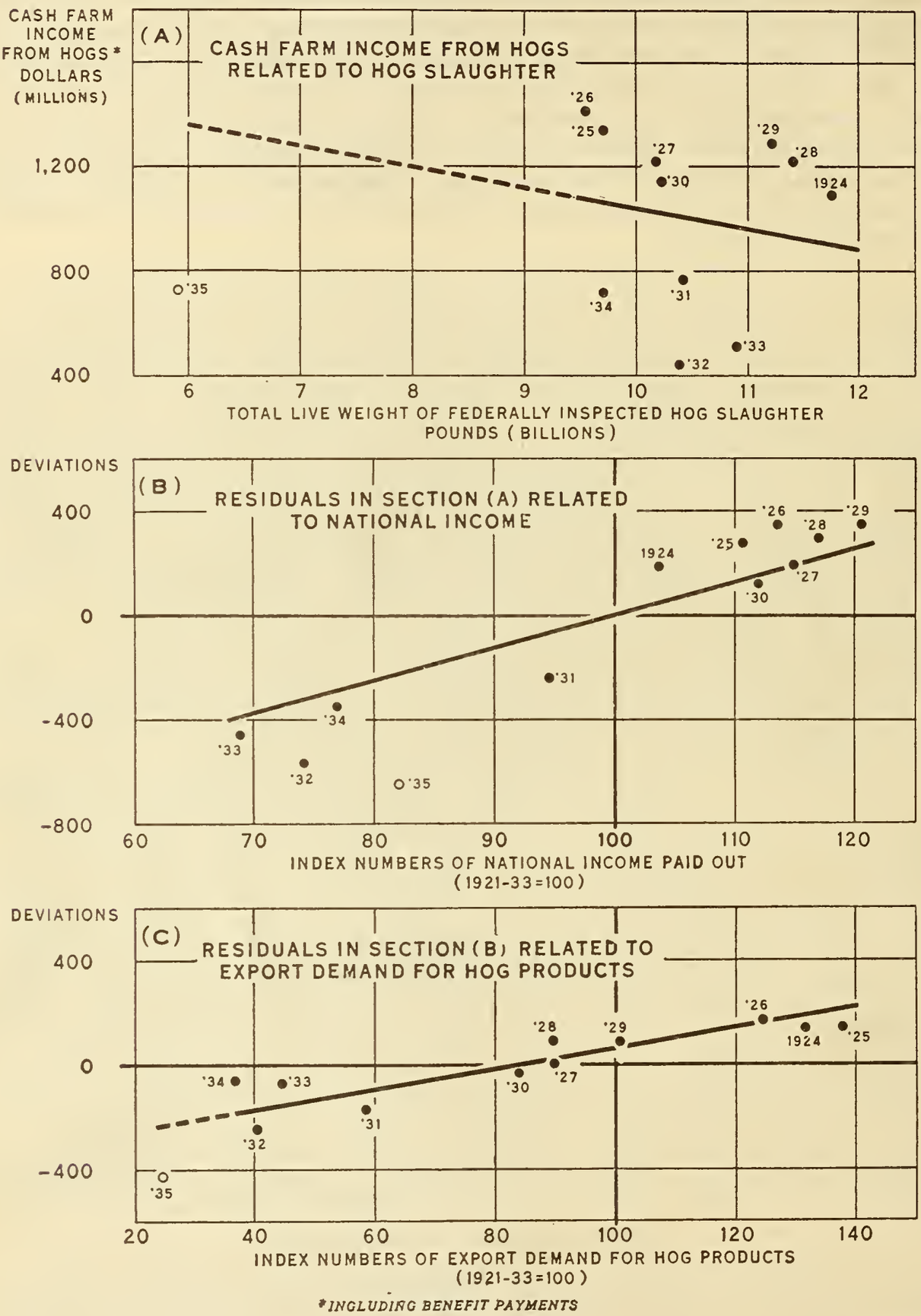


FIGURE 7.

products were not materially affected by the tax. Although prices received by hog producers were lowered by the tax, the funds derived from the tax were returned to producers in the form of benefit pay-

ments. Such payments, added to the returns from the sale of hogs, resulted in a total income for hog producers as a group of about the same amount as would have been the case had no tax been in effect. These conclusions are based solely on the study of the direct effects of the processing tax, without consideration of the effects of the production-adjustment program.

WHEAT

EFFECTS OF THE WHEAT-PROCESSING TAX ON PROCESSORS

The spread between the price per bushel of wheat and the value of the milled products yielded by a bushel of wheat is shown in table 6 and figure 8. It will be observed that before, during, and after the period in which the processing tax was in effect the spread changed relatively little, except that during the period of the tax it was increased by approximately the amount of the tax. There was a slight rise in the spread during the spring and early summer of 1933, when prices were rising rapidly, and at the end of June the spread had risen to nearly 50 cents per bushel. The spread widened suddenly at the time the wheat-processing tax was put into effect and in mid-July was over 75 cents per bushel. There followed a rather gradual decline, until in the latter part of 1934 it was averaging approximately 70 cents per bushel. If, however, we compare the total spread up to the time the processing tax took effect, and subsequently the total spread minus 30 cents per bushel, the amount of the tax, we find that there was relatively little change throughout the entire period. The small rise during the first half of 1933 was followed by a decline during the second half, and during 1934 and 1935 the spread minus the tax averaged approximately the same as did the total spread during 1932. During the 3 years in which the processing tax was in effect this spread, in terms of prices as quoted at the Minneapolis market, averaged 38.6 cents, as compared with an average of 38.1 cents in 1932 and 38.8 cents for the 3 years 1930 to 1932. Following the removal of the processing tax it appears that prices for flour dropped approximately the amount of the tax. The spread minus the 30-cent tax for the last half of 1935 averaged 35.3 cents, compared with a spread of 36.9 cents for the 8 weeks following the removal of the tax. For the period January through July 1936 (29 weeks) the spread had widened somewhat so as to average 39.8 cents.

Similar results are obtained, using spreads computed for hard winter wheat at Kansas City and soft winter wheat at St. Louis.

From the foregoing it is evident that the millers shifted the processing tax, and it follows that the tax must have been paid either by producers through a reduction in the price of wheat below what it would have been without the processing tax or by consumers through higher prices for mill products than otherwise would have been paid.

EFFECTS OF THE WHEAT-PROCESSING TAX ON PRODUCERS

The level of wheat prices in the United States is closely related to the level in foreign markets. If United States prices fall low enough relative to foreign markets, United States wheat will be exported; whereas if they are high enough relative to foreign markets, foreign wheat will be imported. A convenient comparison is between prices in United States markets and at Liverpool, Great Britain being the outstanding import market of the world where wheat is not subject

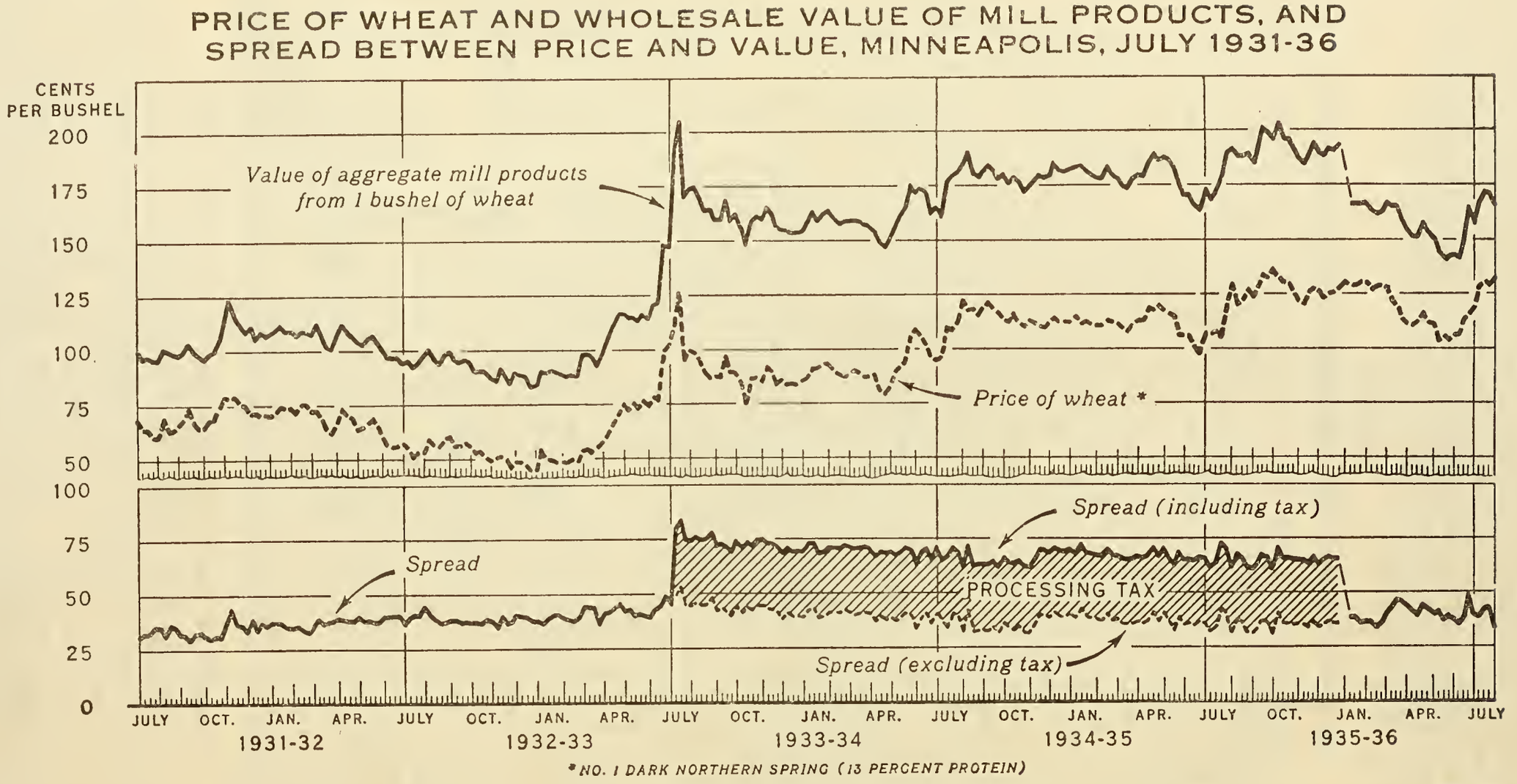

PRICE OF WHEAT AND WHOLESALE VALUE OF MILL PRODUCTS, AND SPREAD BETWEEN PRICE AND VALUE, MINNEAPOLIS, JULY 1931-36
CENTS PER BUSHEL
200
175
150
125
100
75
50
100
75
50
25
0
Value of aggregate mill products from 1 bushel of wheat
Price of wheat *
Spread (including tax)
Spread
PROCESSING TAX
Spread (excluding tax)
JULY OCT. JAN. APR. JULY OCT. JAN. APR. JULY OCT. JAN. APR. JULY OCT. JAN. APR. JULY OCT. JAN. APR. JULY
1931-32
1932-33
1933-34
1934-35
1935-36
* NO. 1 DARK NORTHERN SPRING (13 PERCENT PROTEIN)
BAE 26823

FIGURE 8.

to high import duties [8] or quota or exchange restrictions on imports. The Liverpool price, minus the cost of exporting wheat from Chicago to Liverpool, may be said to constitute a sort of "floor" for wheat prices at Chicago. As prices at Chicago decline relative to prices at Liverpool, exporting becomes profitable and the export demand tends to prevent any further decline of prices. On the other hand, Chicago prices also have a "ceiling", at which wheat is imported into the United States. This ceiling is the price in foreign markets, plus the cost of importation into the United States including import duties.

This general concept of a "floor" and "ceiling" between which United States prices may fluctuate, depending upon changes in domestic supply and demand conditions, is helpful to an understanding of the way in which prices in the United States have fluctuated during the last few years. However, this "floor" and "ceiling" concept is not to be considered in the light of an absolute top or an absolute bottom to fluctuations in United States wheat prices. Variations of costs of exporting or importing, as well as variations in prices as between grades and as between different regions of the United States, affect the limits of this zone within which domestic prices may fluctuate. In addition, these limits themselves are affected by conditions in the United States which affect our exports and hence the world price upon which the "floor" and "ceiling" are based.

Exports of wheat from the United States are of the nonpremium types, whereas imports are chiefly of those types which command a premium in the domestic markets. Generally speaking, at prevailing freight rates, the United States is likely to export considerable quantities of wheat in the region east of the Rockies whenever the price at Chicago falls to about 15 cents per bushel below Liverpool. Similarly, there is likely to be a significant volume of imports into the United States whenever the domestic price for premium types rises above the Liverpool market value to an amount equal to the 42-cent import duty minus any advantage in freight rate to the United States from export sources as compared with the rate to Liverpool.

As shown by figure 9 and table 7, prices at Chicago have been at, or close to, their upper limit relative to Liverpool beginning with June of 1933. In 1933 the United States crop was less than domestic requirements, but a large carry-over avoided the necessity of imports. In 1933–34 No. 2 Hard Winter at Chicago averaged more than 20 cents per bushel higher than the average price of parcels of wheat sold at Liverpool. In 1934 the drought, especially in the spring-wheat area, again resulted in a short crop, and it was necessary to reduce the carry-over of durum and hard red spring wheat to unusually low levels and in addition to import some durum wheat, with the result that the spread between Chicago and Liverpool increased at times to 30 cents or more. In 1935 the production of hard wheats was greatly reduced by continued drought in the Southwest and by rust damage in the spring-wheat area, and it became necessary to import hard red spring wheat. This accounts for the spread between Chicago and Liverpool of close to 30 cents for a period of time and an average of 18 cents for the entire 1935–36 season. The decline in the spread in the latter part of the year reflects an increase in the Liverpool price

[8] Wheat into the United Kingdom from non-British possession pays a duty of 10 percent ad valorem.

as a result of an unusually large proportion of high-priced Manitobas in that price.

During the period from the spring of 1933 through the 1935–36 crop year, prices of wheat in other United States markets east of the Rocky Mountains also fluctuated close to their upper limit or "ceiling" established by world prices. Consequently, it may be concluded that had there been no processing tax, wheat prices in the United States under existing supply and demand conditions could not have been significantly higher relative to prices at Liverpool or other world markets.

There remains the possibility that the processing tax may have had some effect in lowering prices in world markets. This could happen only if the consumption of wheat in the United States were sufficiently

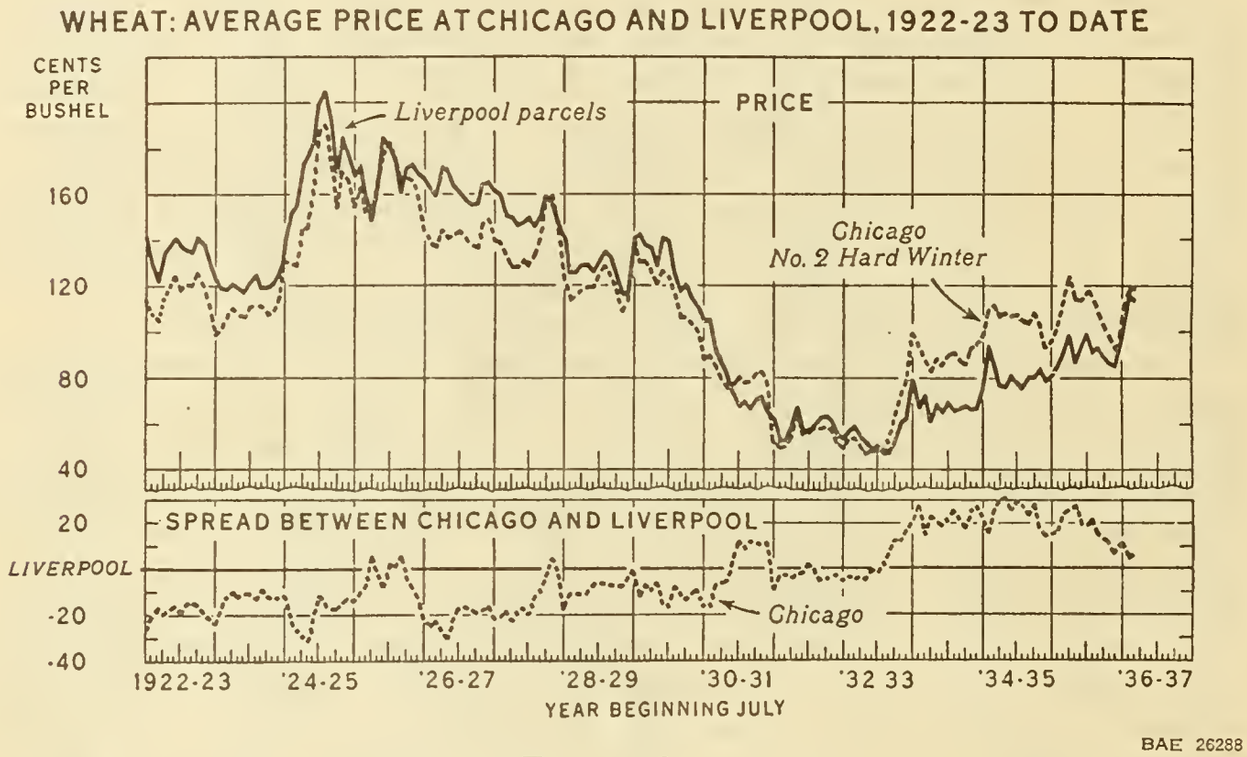


FIGURE 9.

reduced, by reason of the processing tax, as to cause an increase in the supply of wheat made available to foreign countries. The estimated flour consumption in past years has varied relatively little from year to year in spite of rather wide year-to-year variations in the price of flour. In other words, the demand for flour is relatively inelastic—that is, people do not significantly decrease their flour consumption even in the face of a marked rise in its price. As indicated by figure 10 and table 8, only a small decrease in flour consumption, probably about 14,000,000 bushels (3,000,000 barrels) or about 3 percent of the average, possibly could be attributed to the wheat-processing tax, if the latter were passed on to consumers. So small a reduction in United States domestic consumption, in effect added to world supplies, would not be expected, on the basis of past supply-price relationships, to have any measurable effect upon the price of wheat on world markets.

Since the price of wheat was not materially affected by the processing tax, the acreage planted to wheat also was unaffected, leaving out of consideration the production-adjustment programs. It follows that the benefit payments financed by the processing tax represented

a net addition to the incomes of wheat producers, over what they would have received without any tax and payments, with all other conditions the same.

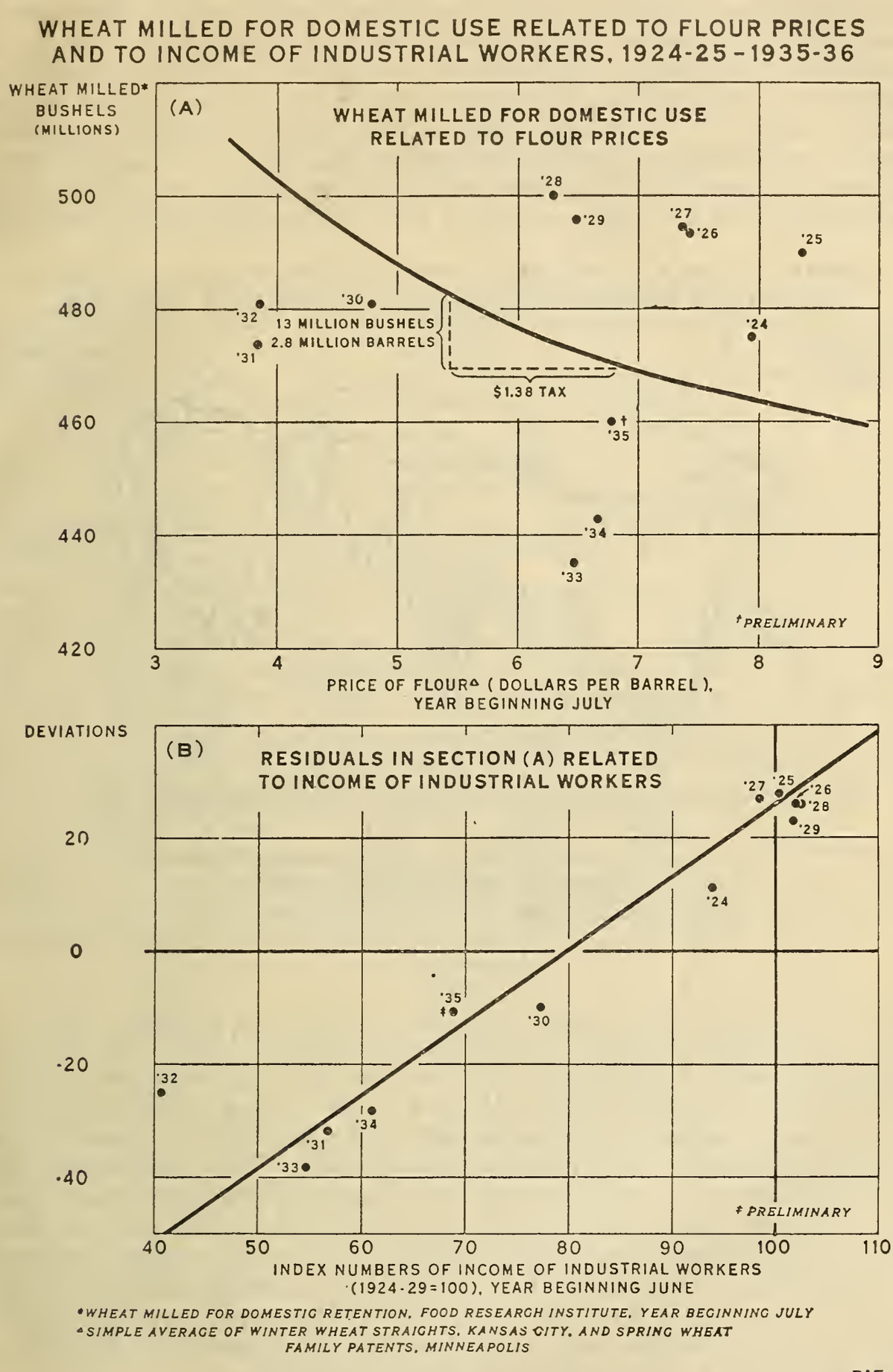


FIGURE 10.

EFFECTS OF THE WHEAT-PROCESSING TAX ON WHOLESALE AND RETAIL PRICES OF MILL PRODUCTS

The effect of the processing tax was to increase the price of flour rather than the price of other milled products. This is shown by a comparison of prices of wheat flour, bran, and middlings at the Minne-

apolis and Winnipeg markets. During 1932–36 the price of "First Patent" flour at Minneapolis was higher than the price of "Top Patent", the comparable grade of flour, at Winnipeg. Prices of bran and standard middlings (or shorts) at Minneapolis, on the other hand, except for the 1934–35 season, were lower than the prices of these products at Winnipeg. In 1934–35 and again in 1936 the extreme shortage of feed resulting from the drought forced feed prices in the United States to unusually high levels. Prices declined in 1935 relative to Winnipeg when the new crops that year relieved the feed shortage. Normally the price of mill feeds in Canada is high because feed-grain prices are high, which in turn is the result of a relatively

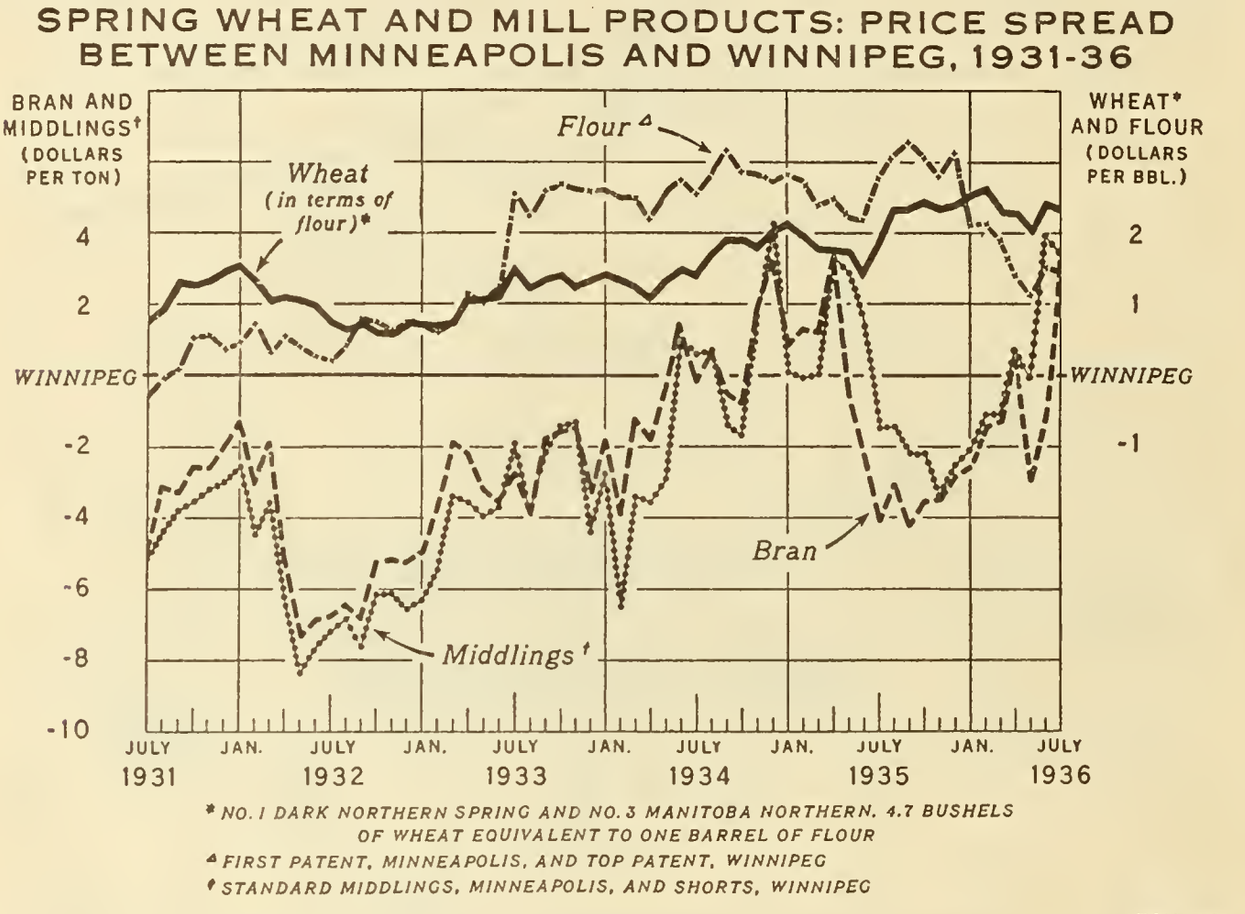


FIGURE 11.

small production of corn and other feed grains in Canada. Table 9 shows the course of prices of standard middlings, bran, and flour at Minneapolis and Winnipeg, as quoted by the Northwestern Miller, from July 1931 through July 1936, and figure 11 and table 10 indicate the amount by which the Minneapolis price was above or below the Winnipeg price each month during this period. The chart shows the general rise in 1933 of flour, bran, and middling prices in the United States, as well as the sudden and very sharp rise in the price of flour in the United States and continuation at the higher level following the imposition of the tax in July. The chart also shows that at the time the processing tax was removed in January 1936 bran and middling prices at Minneapolis did not decline relative to Winnipeg, while there was a sharp decline in the price of flour.

Table 11 shows the spread between the wholesale and retail prices of flour at Minneapolis, monthly, from July 1931 to July 1936. In this market the spread averaged 0.8 cent per pound for the period prior to the tax, January 1932 through June 1933, while for the tax period,

August 1933 through December 1935, the spread averaged 1.2 cents, showing a substantial increase indicative of a more or less constant percentage "mark-up" of retail over wholesale prices. If the retailers had absorbed the tax, a decrease in the spread would have been necessary. Moreover, the spread for the period following the removal of the tax, August 1933 through December 1935, advanced even further to 1.3 cents. A similar situation is indicated for other cities for which data are available.

The effect of the processing tax, consequently, was to increase the price of flour to consumers and to leave virtually unchanged the price of wheat and of milled feeds.

SUMMARY AND CONCLUSIONS

Analysis of the spread between the price of wheat and the wholesale price of milled products before, during, and after the period in which the processing tax was in effect indicates that the millers did not absorb an appreciable portion of the tax, if any.

An analysis of the factors affecting flour consumption in the United States indicates that the demand for flour is very inelastic. It is so inelastic that any rise in flour prices equivalent to the tax would have been borne by the consumers with a decrease in consumption of not more than 3 percent, or about 3,000,000 barrels annually. On the basis of past supply-price relationships, a decrease in domestic consumption of this quantity would have no material depressing effect upon wheat prices. Moreover, a comparison of prices of wheat in the United States with prices at Liverpool does not indicate any lowering of the former relative to the latter as a result of the processing tax. It follows, therefore, that since the millers did not bear the tax, and since the price of wheat appeared substantially unaffected by the tax, the tax must have been passed on to consumers of the products of wheat milling.

An analysis of the prices of flour and wheat mill feeds in relation to wheat prices and other conditions indicates that the prices of mill feeds were not measurably affected by the tax on wheat, which apparently was shifted practically in its entirety to consumers of flour.

RYE

EFFECTS OF THE RYE-PROCESSING TAX ON PROCESSORS

That the processing tax on rye was not absorbed by millers is clearly shown by table 12 and figure 12. It will be observed that before, during, and after the period in which the processing tax was in effect the prices of rye and milled products experienced very similar fluctuations, except that in September 1935 when the tax became effective there was a marked increase in the spread between the price of a bushel of rye and the wholesale price of the milled product. The increase averaged the amount of the tax. Then, following the removal of the processing tax in January 1936, flour prices dropped by the amount of the tax. If we compare the total spread before the time the processing tax took effect with that during the time the tax was effective, minus 30 cents per bushel, and with the spread after removal of the tax, we find that there was relatively little change throughout the period. The spread for 6 months before the tax (March–August) plus the 6 months following the removal of the tax (February–July)

averaged 31.5 cents, whereas the spread during the 4 months (September–December), during which the tax was in effect, less 30 cents, averaged 30.9 cents (see fig. 12).

From the foregoing it is evident that the millers shifted the processing tax, and it follows that the tax must have been passed back to producers through lower prices of rye, or passed on to buyers of mill products through increased prices.

EFFECTS OF THE RYE-PROCESSING TAX ON PRODUCERS

If, in figure 12, a straight trend line is drawn through the points for July 1935 to March 1936, representing monthly prices of rye, including the very short period in which the tax was in effect, the resulting devia-

PRICE OF RYE AND WHOLESALE VALUE OF MILL PRODUCTS, AND SPREAD BETWEEN PRICE AND VALUE, MINNEAPOLIS, JULY 1933-36

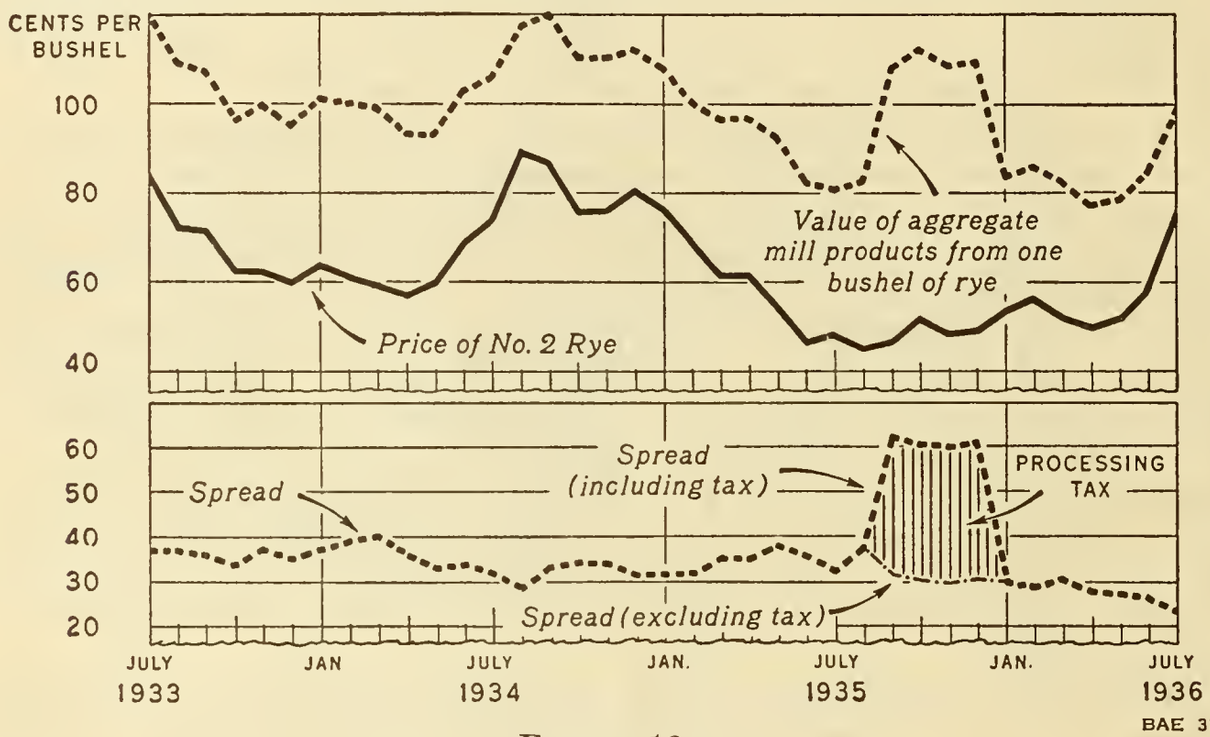


FIGURE 12.

tions do not furnish any indication that rye prices were affected to any measurable extent by the tax. Apparently, prices moved about as they would have been expected to without any tax in effect. It appears, therefore, that rye producers were not directly affected by the tax, and that benefit payments received represented a net addition to income.

EFFECTS OF THE RYE-PROCESSING TAX ON WHOLESALE PRICES OF MILL PRODUCTS

The processing tax apparently increased the price of rye flour by approximately the amount of the tax. Rye middlings are relatively unimportant compared with wheat middlings, but because of their similarity to the latter, in physical characteristics and feeding value, prices of the former necessarily must closely follow prices of the latter. In the analysis of the processing tax on wheat it was noted that there was no clear evidence that wheat middlings prices were affected by the tax.

SUMMARY AND CONCLUSIONS

The effect of the processing tax on rye was to increase the price of flour and to leave virtually unchanged the price of rye and of the milled feed. The millers evidently did not pay the tax, but passed it on to the users of flour.

COTTON

EFFECTS OF THE COTTON-PROCESSING TAX ON PROCESSORS

Although there are considerable fluctuations in cotton manufacturers' margins, or the spread between the price of a given quantity and quality of cotton cloth and the cost of the raw cotton used in producing it, a comparison of such margins during the period of the tax with the margins prevailing immediately before and after it was in effect should give an indication of whether or not the manufacturers were able to shift the tax. The 17 constructions (6 print cloths, 3 sheetings, 4 drills, 2 ducks, 1 twill, and 1 sateen) of unbleached cloths included in this analysis are used to represent the cotton-goods industry as a whole. The spread or margin represents the difference between the cost of a pound of raw cotton at a given time and the sales value at that time of the quantity of these 17 constructions obtainable from a pound of cotton. From this spread the manufacturers derive their manufacturing and distributing costs and profits, assuming that they buy their raw cotton simultaneously with the sale of the cotton cloth. Frequently, in actual practice, there may be a considerable lag between the two transactions, but over a period of time the effects of such lags may be assumed to "average out." In any case it is possible for processors largely to offset the effects of this lag by hedging operations.

An examination of this manufacturing margin for the last several years shows that for the period from 1925–26 to 1929–30 the average spread was 14.48 cents per pound (table 13). In the 2 depression years immediately prior to the imposition of the tax, 1931–32 to 1932–33, the spread averaged 9.74 cents. In the 2½-year period during which the cotton-processing tax was in effect (August 1933 to December 1935) the average spread between the sales price of these grey cloths and the market price of the cotton generally used in their construction was 16.86 cents. Thus, the margin during the period the tax was in effect averaged 2.38 cents higher than in the 5 years, 1925–26 to 1929–30, and 7.12 cents higher than in the 2 years immediately preceding 1933–34. (See fig. 13 and table 14.) Available data indicate that labor, freight, and certain other costs were lower during the period in which the processing tax was in effect than in the 5 years ending with 1929–30. Consequently, cotton-textile manufacturers could hardly have expected under competitive conditions to maintain an average manufacturing margin during the period from August 1933 to January 1936 higher by the full amount of the tax than for the 5 predepression years. However, since certain manufacturing costs were higher in the period the processing tax was in effect than in the 2 years immediately preceding, and since returns to manufacturers are generally recognized to have been very low in these years, it is reasonable to expect that in the absence of the tax the margin would have averaged higher during the period of the tax than in the 2 years ended July 1933. This accounts for the fact that the actual increase in the spread was greater than the amount of the tax.

In the week ended January 17, the first full week after the Supreme Court announced its decision, the spread between the price of raw cotton and the price of grey cloth was 13.35 cents, and for the 4 weeks ended February 7 it averaged 13.20 cents, compared with an

average spread (including the tax) of 17.01 cents for the week ended January 3, and an average of 17.08 cents for the 4 weeks ended January 3. In other words, the cotton-manufacturers' margin between the cost of raw cotton and the price of the finished goods was reduced during the 4 weeks following the invalidation of the processing tax, as compared with the 4 weeks preceding such invalidation, by almost exactly the equivalent of the tax.

In the first 6 months following the invalidation of the tax (February to July, inclusive) the spread averaged 12.37 cents, which was 4.49 cents less than the spread during the 29 months the tax was in

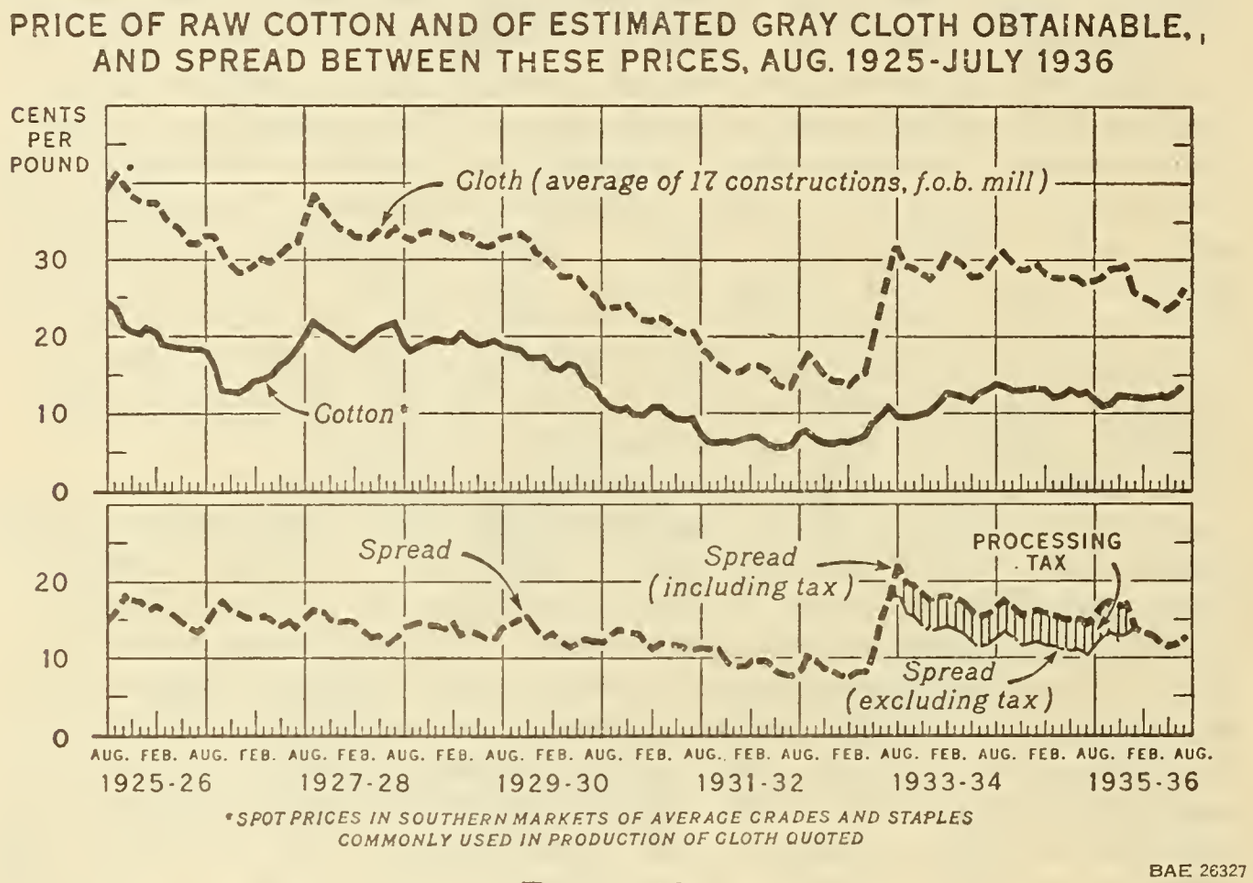


FIGURE 13.

effect. Since the tax amounted to only 4 cents per pound, this means that during the period from February to July 1936, the first 6 months after the removal of the tax, the average spread was lower than during the period in which the tax was in force by an amount somewhat greater than the tax, despite the fact that this was a period of expanding business and increasing demand for textiles.

The above comparisons, based on 17 constructions of cloth fairly well representing a cross section of the industry, indicate that from the standpoint of cotton-textile manufacturers as a whole they did not bear any significant proportion of the tax in the form of reduced margins. Without the tax, however, domestic manufacturers would have been able, other things remaining the same, to sell these goods at a price about 12 percent below the price they actually sold for and still have maintained the same manufacturing margin, as shown in a later section. Under such circumstances the sale of cotton textiles by manufacturers would probably have been substantially larger.

It is significant that a considerable proportion of the cloth sold by cotton manufacturers from August 1935 until the tax was invalidated was sold under contracts containing special provisions with respect to the processing tax. In August 1935 the following clause was adopted

for general use by the Association of Cotton Textile Merchants of New York:

> If and when, for any reason, seller's liability for processing tax levied under the Agricultural Adjustment Act, as heretofore and hereafter amended, is increased, decreased, or terminated, or such taxes shall be invalidated by final decision of the Supreme Court of the United States, prices on any uninvoiced portion of this contract are subject to adjustment at a rate computed on the basis of conversion factors set up by the Treasury decision 4433, approved May 10, 1933.
>
> In addition, the seller will credit on the buyer's account the amount, computed on the basis of such conversion factors, or any such tax which, by reason of such invalidity, shall have been refunded to the seller or seller shall have been relieved from paying, with respect to any portion of this contract as to which title has passed within _____ days [usually 120 days for converters, 90 days for creditors and wholesalers, 30 days for retailers] prior to such termination of validity. The title shall be deemed to have passed when goods are invoiced. No such credit shall be allowed hereunder in respect of any portion of this contract upon which a direct refund from the Government on floor stock is recoverable by a buyer or any such subsequent holder.
>
> In any settlement hereunder the seller shall be entitled to deduct on a pro-rata basis reasonable expenses of any such refund or relief.

Another clause which was used by one company reads as follows:

> It is understood that the price of this contract includes the cotton-processing tax. If and when final and competent authority relieves the sellers of liability for this tax the buyer will be reimbursed accordingly. The above applies to goods purchased on and after July 26, 1935. If and when the Supreme Court declares the Agricultural Adjustment Act valid and constitutional, this agreement becomes null and void.

These clauses may be taken as additional evidence that the mills were shifting the tax. If the intent indicated by these provisions was carried out, the mill margin or spread would be expected to drop about in proportion to the tax following its invalidation, unless some other important cost factor changed at that time or unless general demand conditions changed materially. It has been shown that such a drop actually occurred.

There have been considerable differences, of course, in the fluctuations in the mill margins for individual constructions. However, except in the case of combed voile the spreads (after deducting the processing tax from the manufacturer's costs) for the five important constructions shown separately in table 13 averaged only 1 to 12 percent less for the period in which the processing tax was in effect than the average for the 5 years, 1925–26 to 1929–30, and 27 to 37 percent higher than in the 2 years ended July 1933 when margins were adversely affected by the depression. In table 13 are shown comparisons of the cloth prices, the prices of the raw cotton, and the manufacturing margin of various constructions for six specified periods: (1) the 5 years immediately preceding the depression, (2) the 2 years immediately preceding the imposition of the tax, (3) the 29 months during which the tax was in effect, (4) the 4 weeks immediately preceding the termination of the tax, (5) the 4 weeks immediately following such termination, and (6) the 6 months, February to July 1936.

EFFECTS OF THE COTTON-PROCESSING TAX ON DISTRIBUTORS

Having indicated that the cotton manufacturers as a group did not bear any significant proportion of the cotton-processing tax, the next step is to determine, if possible, the effect of the tax on retail prices of cotton goods and upon the spread between wholesale and retail prices. Unfortunately, comparatively few data adapted to such an analysis

are available. But retail prices are available for four cotton articles (overalls, sheets, shirts, and bleached muslin) in 110 stores located in 25 cities from late July 1933 to May 1936.[9] "Wholesale" prices (Bureau of Labor Statistics) also are available for these same items during this period, but these prices are not strictly comparable, and may represent prices paid to manufacturers by jobbers or by retailers, depending upon the circumstances of sale.

The spread between the wholesale and retail prices of sheets, shirts, and muslin in the period from August 1933 to December 1935 showed increases of from 3.7 to 31.0 cents per piece or per yard over the margin on July 27, 1933 (table 15). These increases in the margins for sheets, shirts, and muslin were equivalent to from 50 to 300 percent. In the case of overalls, the spread averaged 22.1 cents higher during the period the tax was in effect than on July 27, 1933. On July 27, 1933, the retail prices of these four cotton items averaged 11.4 percent above the existing wholesale prices. During the 2½ years the tax was in effect the retail prices of these goods averaged 37.6 percent above the wholesale prices.

It is recognized that the comparison of prices and margins before and after the imposition of the tax, using the single month, July 1933, to represent conditions before the tax became effective, may not be representative from the standpoint of middlemen's margins. It does show, however, that the margins were higher during the 2½-year tax period than immediately before the tax went into effect, and this increase was so great that there seems no reason to expect that it would have been significantly higher had the tax not been levied. Thus, the presumption arises, although it is not definitely proved, that the processing tax was not borne by retailers or other distributors of cotton goods.

In view of the fact that the data contained in table 15 are very limited, both as to the period covered and the number of items included, retail prices of 18 cotton items were compiled from mail-order catalogs and from records of the Bureau of Labor Statistics. These items were combined into the five groups and averaged for the various periods shown in table 16. In addition, the cost of the raw cotton most generally used in each article has been estimated (on the basis of the cotton prices existing at the time the retail prices were quoted) and the spread between the two has been calculated.

An examination of these data shows that in four of the five groups for which these margins have been computed, the spread between the market price of raw cotton and the retail price of the manufactured articles during the period the cotton-processing tax was in effect were greater than the average for the 2 years immediately preceding, by an amount approximately equal to or greater than the tax. These margins, however, were less during the period the tax was in effect than in the 2 years 1928–29 and 1929–30, the first 2 years for which complete data were available, which might have been expected in view of the differences in manufacturing and distributing costs. Except in the case of the goods whose prices were taken from the mail-order catalogs, these margins averaged lower during the 6 months, February to July 1936, than during the period the tax was in effect by an amount more than the equivalent of the tax. In the case of the items taken

[9] These prices were discontinued in May because arrangements were being made to obtain certain unpublished data from the Bureau of Labor Statistics.

from the mail-order catalogs, the margins based on retail prices quoted in the spring and summer catalog of 1936, which are considered as representative of the period February 1936 to July 1936, were lower than the average for the 2½ years ended December 1935, but not by as much as the processing tax. But the margins based on the prices taken from the fall and winter catalog of 1936–37, the first catalog made up after the termination of the processing tax, were lower than in the period from August 1933 to December 1935 by more than the amount of the tax.

In view of the higher level of general business conditions in the calendar year 1936 as compared with the 2½ years from August 1933 to early January 1936, these comparative retail margins indicate that in general the cotton-processing tax was not borne by distributors in the form of lower margins. However, the higher retail prices resulting from the processing tax reduced somewhat the volume of business done by wholesalers and retailers as well as by manufacturers.

EFFECTS OF THE COTTON-PROCESSING TAX ON CONSUMERS AND PRODUCERS

The next step in the analysis of the incidence of the tax is to determine the effects of higher retail prices upon the domestic consumption of cotton goods, assuming for the moment that processors and distributors, who did not absorb the tax themselves, passed it on to consumers. This is largely a question of the elasticity of the domestic demand for cotton, or the extent to which changes in cotton and cotton-textile prices result in changes in the quantity of cotton consumed in the United States. A very inelastic demand, under which a proportionately small change in consumption accompanies a given change in price, would mean that an increase in the price of cotton-textile products would have a relatively small effect upon domestic consumption. On the other hand, if the domestic demand for cotton goods were elastic, an increase in the retail prices of cotton goods would more drastically reduce consumption in the United States, increasing the quantity remaining to be exported and tending to lower the price received by producers for a given quantity of raw cotton.

An analysis of the relation of domestic cotton consumption to cotton prices, and to industrial production expressed as a percentage of trend, during the last 15 years, is presented in figure 14. (For basic data see table 17.) This analysis, while subject to certain limitations because of insufficient data, indicates that if the whole amount of the processing tax were passed on to consumers, with cotton prices around 10 to 12 cents per pound such an increase would be expected to reduce domestic cotton consumption by about 400,000 to 500,000 bales annually. The way in which this estimate is obtained will be evident by referring to the curve representing the average relation between prices and consumption in the upper section of figure 14.

The next step in the analysis is to determine the probable effect of such a change in domestic cotton consumption on the price of American cotton. In figure 15 (see table 18 for basic data) is presented an analysis of the relation between the price of American cotton and the world supply of American cotton, world supply of foreign cotton, and world industrial production expressed as a percentage of trend. By using the curve shown in the upper section of this chart, representing the average relation between world supplies of American cotton and

domestic prices, a very rough estimate may be made of the probable effect on the price of raw cotton in the United States of a given reduc-

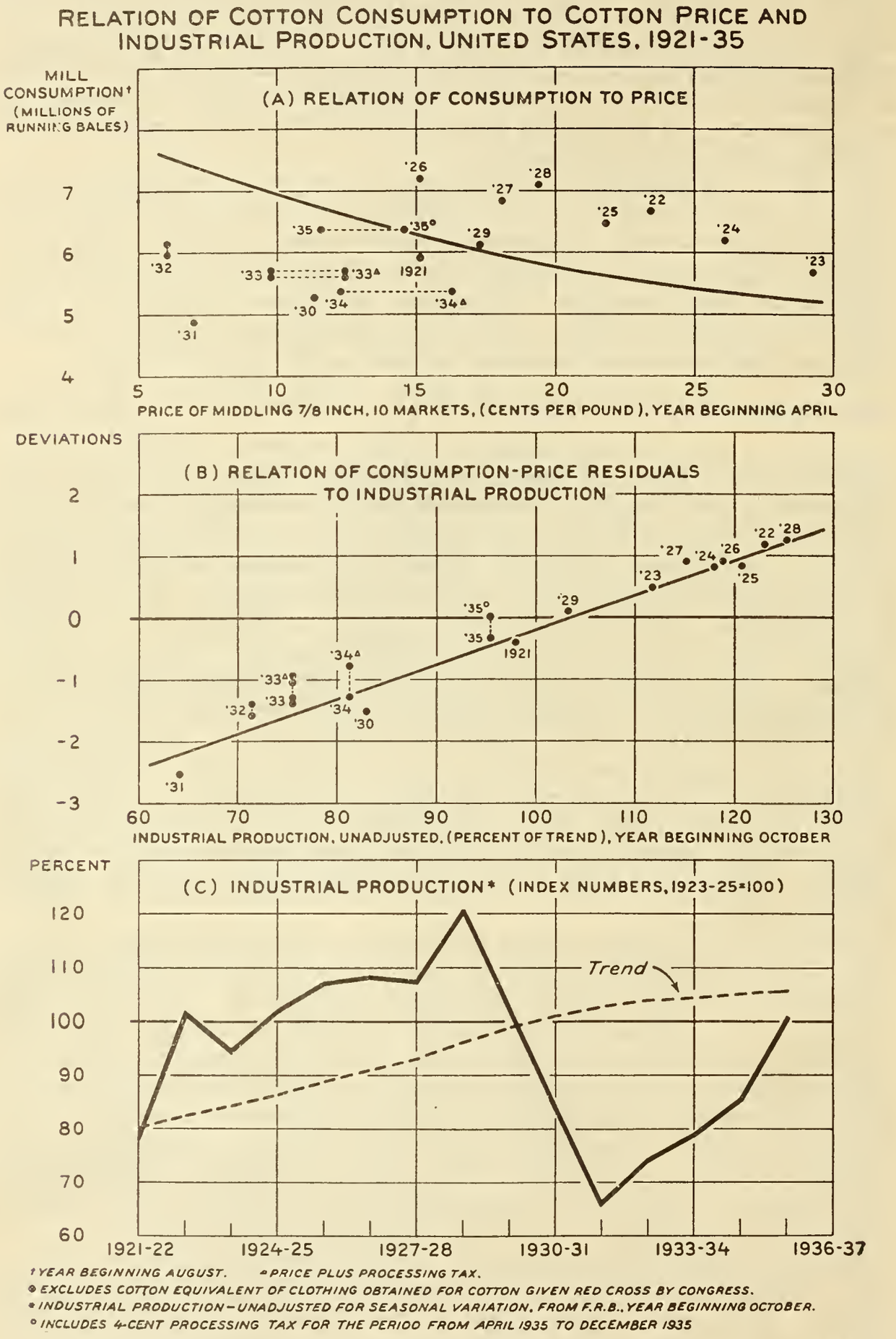


FIGURE 14.

tion in the domestic consumption of cotton. This approach treats the reduction in domestic consumption as in effect the same as an increase in the world supply. A reduction equivalent to that esti-

mated to have resulted from the higher retail prices arising from the processing tax on raw cotton indicates a decline in price of about one-half of a cent per pound with supplies at the general level prevailing during the period the tax was effective. Only to this maximum extent, it may be concluded, could the price of raw cotton have been reduced as a result of the imposition of the processing tax. The actual reduction in price, however, probably was somewhat less than this amount, since the reduction in world prices of raw cotton indicated above would prevent domestic prices of cotton textiles from rising by the full amount of the tax, and consequently domestic consumption would be reduced less than indicated in the preceding paragraph.

One reason for this relatively small effect of a reduction in American cotton consumption upon the price of raw cotton is the fact that

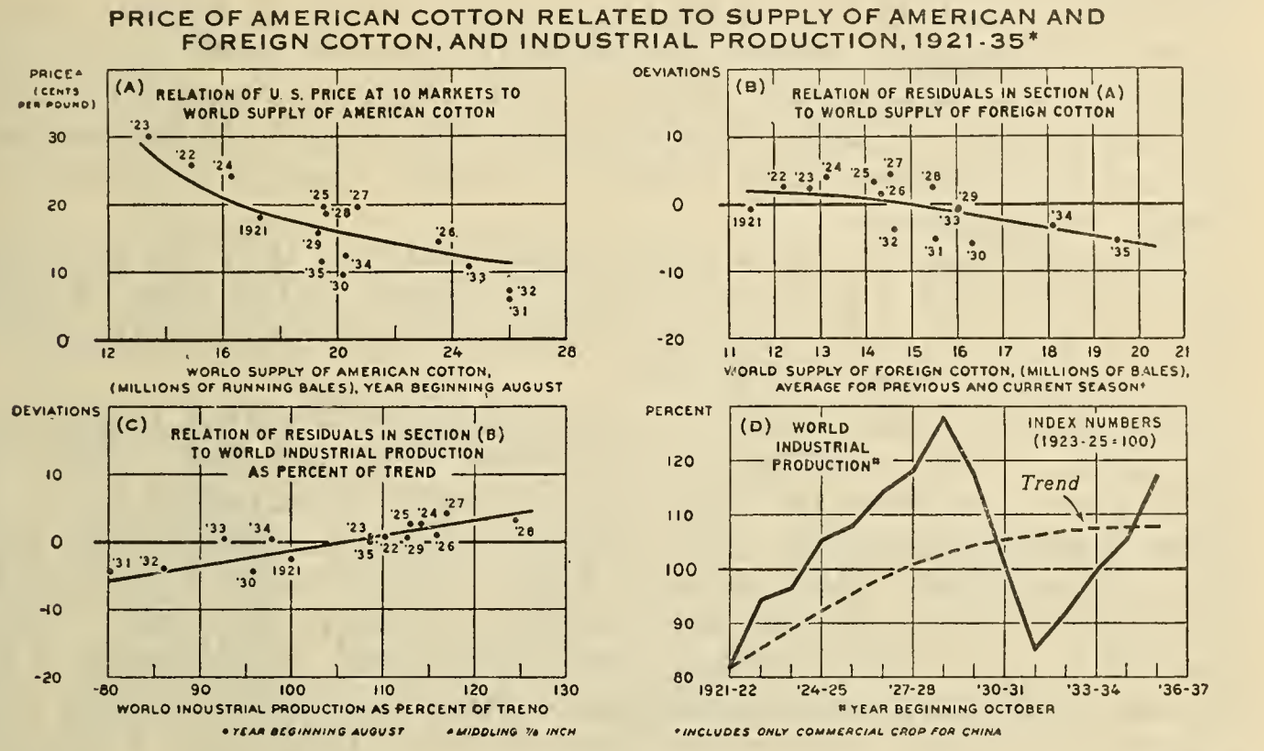


FIGURE 15.

foreign countries usually consume more than half of the domestic crop, and the elasticity of demand for American cotton in those countries is greater than in the United States. This means that the relatively small indicated decline in the price of American cotton after the imposition of the processing tax and decreased domestic consumption would result in a significant increase in foreign consumption, which in turn would prevent prices declining as much as they would if the foreign demand for American cotton were not more elastic than the domestic demand.

It has been indicated that processors and distributors of cotton and cotton goods did not absorb the tax, but passed it on to consumers or back to producers, or both, by enlarging their margins. The facts regarding price-consumption and supply-price relationships presented in the preceding paragraphs indicate that a large part of the tax was passed on to consumers in the form of higher prices, which consumers resisted by curtailing consumption. This in effect added an equivalent quantity of cotton to the world supply of American cotton, thereby decreasing prices of raw cotton in the United States by an amount approaching one-half cent per pound. It thus appears that a large part of the tax was paid by consumers and only a small part of

it by producers, assuming that supply and demand conditions, except as affected by the tax, were the same as they would have been in the absence of a tax. As in other cases, producers received, in the form of benefit payments, more than the amount by which cotton prices were reduced.

SUMMARY AND CONCLUSIONS

Considering the average mill margins existing during the 29 months the processing tax was in effect relative to those prevailing immediately before and following such period, and the comparative level of wages and certain overhead costs in these periods, it appears that from the standpoint of the cotton-textile industry as a whole very little of the tax was borne by manufacturers as a group in the form of lower mill margins.

An examination of the spread between wholesale and retail prices of certain cotton goods during the period the tax was in effect, compared with the margins existing in July 1933, although based on a rather limited number of data, indicates that distributors of cotton goods were able to increase their margin more than enough to take care of the processing tax.

These analyses of prices and margins indicate that the processing tax in large part was passed on to consumers in the form of higher prices for cotton goods or passed back to the producers in the form of lower prices for their raw cotton.

An analysis of the extent to which changes in cotton prices affect domestic cotton consumption indicates that the tax, which was equivalent to 4 cents per pound gross weight, if all passed on to consumers probably would have reduced domestic consumption about 400,000 to 500,000 bales annually below what it would have been had there been no tax and all other things had been the same. Such a reduction in domestic consumption is estimated, on the basis of past cotton supply-price relationships, to reduce domestic cotton prices approximately one-half cent per pound below those that would have prevailed had the domestic consumption been 400,000 or 500,000 bales larger than it was and all other things had remained unchanged. The fact that such a reduction in consumption would be expected to reduce cotton prices indicates that a part of the tax was borne by the producer, and, consequently, domestic cotton consumption was reduced as a result of the processing tax by an amount somewhat less than that indicated above. This, in turn, would suggest that the portion of the tax borne by domestic producers was probably slightly less than one-half cent per pound. This amount was more than offset by the rental and benefit payments received by producers.

TOBACCO

THE GENERAL SITUATION

Tobacco produced in the United States may be classified into seven general groups: flue-cured, burley, Maryland, fire-cured, dark air-cured, cigar leaf and miscellaneous (Eastern Ohio and Perique). Of the last named, less than 500,000 pounds have been produced annually since 1932. From the standpoint of domestic consumption the first three are used primarily for the production of cigarettes, while the fire-cured and dark air-cured are mainly for smoking, chewing, and snuff. The cigar leaf is used largely for the production of

cigars. Although these general uses are indicated, no one type is used wholly in the manufacture of any particular tobacco product, and the proportions used for each product vary from year to year. As a rule, some of each type is exported, but the principal export types are flue-cured and fire-cured tobaccos. Total exports during the last decade have amounted to a little over 70 percent of the domestic consumption of all tobaccos.

During the period 1923 to 1929 the total supply of all tobacco available for domestic consumption and exports remained fairly stable at slightly more than 3,000,000,000 pounds, of which about 1,700,000,000 pounds were carry-over stocks in the hands of dealers and manufacturers and 1,300,000,000 represented the current crop. In 1929 and 1930 production was increased somewhat and in the latter year total disappearance began to decline so that the carry-over into 1931 of 1,930,000,000 pounds exceeded that of any immediately preceding year. As a result of the low prices accompanying this situation, production was reduced during the next 2 years to a low level of 1,023,000,000 pounds, but the continued curtailment in domestic and foreign consumption caused stocks to increase to the high level of 2,304,000,000 pounds at the beginning of the 1932 season. During the last 3 years an effort has been made to hold down production but stocks of all tobaccos in the hands of dealers and manufacturers still remain at near the record high level of 1932.

Because of the increasing supplies and low prices, marketing agreements between the tobacco trade and the Secretary of Agriculture were instituted in 1933, in which the trade agreed to purchase the 1933 crop at substantially higher prices than were paid in 1932. This agreement on the part of the trade was based upon assurances that a production-control program would be instituted the following year. In the fall of 1933 processing taxes of varying amounts were levied upon the different types of tobacco, and a control program was put into effect in 1934 and 1935. The processing taxes in effect from October 1, 1933, to January 6, 1936, are shown in table 19.

EFFECTS OF THE TOBACCO-PROCESSING TAX ON PROCESSORS

To determine the processing margin, it is necessary to deduct the cost of raw materials used in the manufacture of a product from the price received by the manufacturer for the finished product. In the case of tobacco products, the farm price of the tobacco used must be subtracted from the wholesale price of the product. However, since tobacco is usually stored for a period varying from 1 to 3 years before it is processed, it is necessary first to determine what farm prices should be compared with the wholesale price for any particular time. The coefficients of correlation were determined between the calendar-year average wholesale prices of all tobacco products for the period 1926 to 1935, inclusive, and crop-year average farm prices, with the latter leading from zero to 4 years. The resulting coefficients were plotted (fig. 16, table 20), and the results compared. The highest correlation (0.953) was obtained with farm prices leading by 2 years; but the correlation was higher with leads of more than 2 years than with those of less than 2 years. This seems to indicate that, although more tobacco is stored for 2 years than for any other period, considerably more is stored for periods over 2 years than for shorter periods. Thus the coefficient with a 3-year lead was 0.803, while that for a

1-year lead was only 0.581. For this reason it was believed that a lead of 2½ years would be most representative. In other words, the wholesale price for any given calendar year was compared with the average of the crop-year farm prices 2 and 3 years preceding.[10] It should be noted that, because of the difference between the calendar year and the crop year, the lead used is not 2½ years in actual time elapsed, but slightly over 2 years.

The close relation here shown between farm prices and wholesale prices is probably due to two factors: first, the manufacturers tend to adjust their prices in accordance with changes in the cost of their

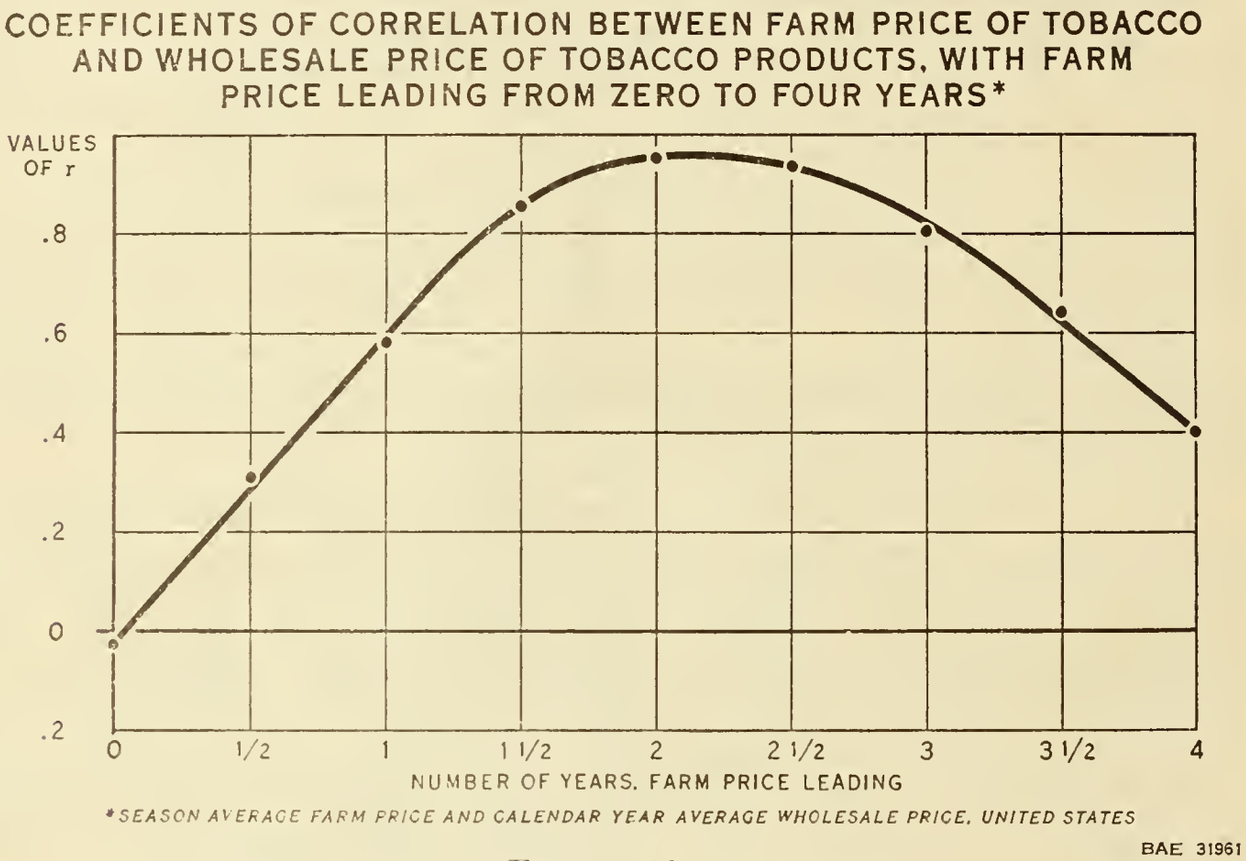


FIGURE 16.

raw material; and second, insofar as possible, they base their price offers for tobacco during any year on anticipated future demand conditions for the finished products.

These price spreads or processing margins were computed for four typical tobacco products, namely, cigarettes (small), cigars (large), granulated smoking tobacco, and plug chewing tobacco. Since the types of tobacco, and the proportions of these types, used in the various products are different, it was necessary to compute weighted farm prices for each product. For example, the domestic tobacco in cigarettes is approximately 57.9 percent flue-cured, 39.4 percent burley, and 2.7 percent Maryland. The yearly farm prices for cigarette tobaccos, therefore, are the averages of the farm prices of these types weighted by the corresponding percentages.[11] The weights used

[10] The typical tobacco manufacturer does not use his stock of one year's crop before starting to use the tobacco grown in the following year. On the contrary, the manufactured products for any one year are likely to contain tobacco grown during two or more of the preceding crop years. Therefore, an average of the farm prices for two years is more likely to be representative of the cost to the manufacturer than is the price for a single crop year.

[11] More accurate results could have been obtained if complete information on prices by grades had been available. For example, burley is used in cigarettes, plug chewing tobacco, and granulated smoking tobacco; but the cigarette grades of burley are uniformly higher in price than the smoking or chewing tobacco grades. Inadequate information on prices of the various grades has necessitated the use of average prices in every case. Lack of data on prices of imported tobacco and the proportion of such tobaccos used in the different products likewise made it necessary to omit consideration of the influence of these factors upon the margin, but this is believed not materially to affect the conclusions.

(table 21) were derived from the reports of a large group of manufacturers for the year 1934. The farm prices by type of tobacco and the weighted averages are given in table 22.

A rough measure of the manufacturers' margin may be derived by subtracting from each wholesale price the weighted average farm price 2½ years preceding. The resulting margins include the manufacturers' profits, the cost of processing, the tax on the finished product, advertising cost, and the cost of raw material other than tobacco (this last factor is insignificant except in the case of plug chewing tobacco, of which 35 percent of the weight of the finished product is "other material"). Although the farm prices are on a "farm-sales weight" basis, whereas the wholesale prices are not, it has not been necessary to reduce the latter to farm-sales weight, since this would merely reduce the spread by a constant ratio throughout, the fluctuations remaining approximately the same.

The wholesale-farm price spreads or margins are given in table 23 and charted in figure 17. For each of these four products, the spread rose in 1934, fell slightly in 1935, and fell again during the first half of 1936. These margin changes roughly coincide with the tax payments of the manufacturers. As can be seen from table 19, the processing taxes were first imposed on October 1, 1933, becoming fully effective during 1934. Because of changes applied to most types, the average tax was somewhat lower in 1935 than in 1934. (Although it is difficult to compute a composite tax on all tobacco, it is estimated from the available data that the average tax was about 3.7 cents per pound during 1934 and 3.6 cents during 1935.) Finally, the taxes were discontinued on January 6, 1936. The fact that the margin changes and tax changes go thus together would seem to indicate that the manufacturers as a group shifted all or a large part of the tax to others. The fact that the margin changes in no case exactly coincided with the amount of the tax, however, makes it difficult to determine the exact portion of the tax which was so shifted.

In table 24, the average spread or margin for each product during 1933 and the first 6 months of 1936 is subtracted from the average spread for 1934 and 1935. The difference is a rough measure of the increase in the margin during the period of the processing tax. When this difference is compared with the average tax during the same period (computed by weighting the tax for each type of tobacco used in a given product by the same weights used to average the farm prices), we find that the increase in the margin for cigarettes of 11.3 cents is almost three times the average tax (3.9 cents); and the increase for plug chewing tobacco is 2 cents more than the average tax. On the other hand, the average increase for smoking tobacco was 2 cents while the average tax was 3.8 cents, and the increase for cigars was 3.5 cents compared to a tax of 3 cents.

The increase in the margin for cigarettes, cigars, and plug was more than enough to cover the tax; for smoking tobacco, it was not enough. However, the increases in margins during the period of the tax probably were partly a reflection of higher labor and other processing costs. In addition, if the wholesale prices of the various tobacco products could have been expressed on a farm-sales-weight basis before determining the spreads, the increases in the margins would have been slightly less than indicated above. It is probable that the

increases in margins on cigarettes and plug chewing tobacco were sufficient to cover the processing taxes, even after allowing for these

SPREADS BETWEEN FARM PRICES OF TOBACCO AND WHOLESALE PRICES OF TOBACCO PRODUCTS WITH FARM PRICES LEADING TWO AND ONE-HALF YEARS, 1926-36 *

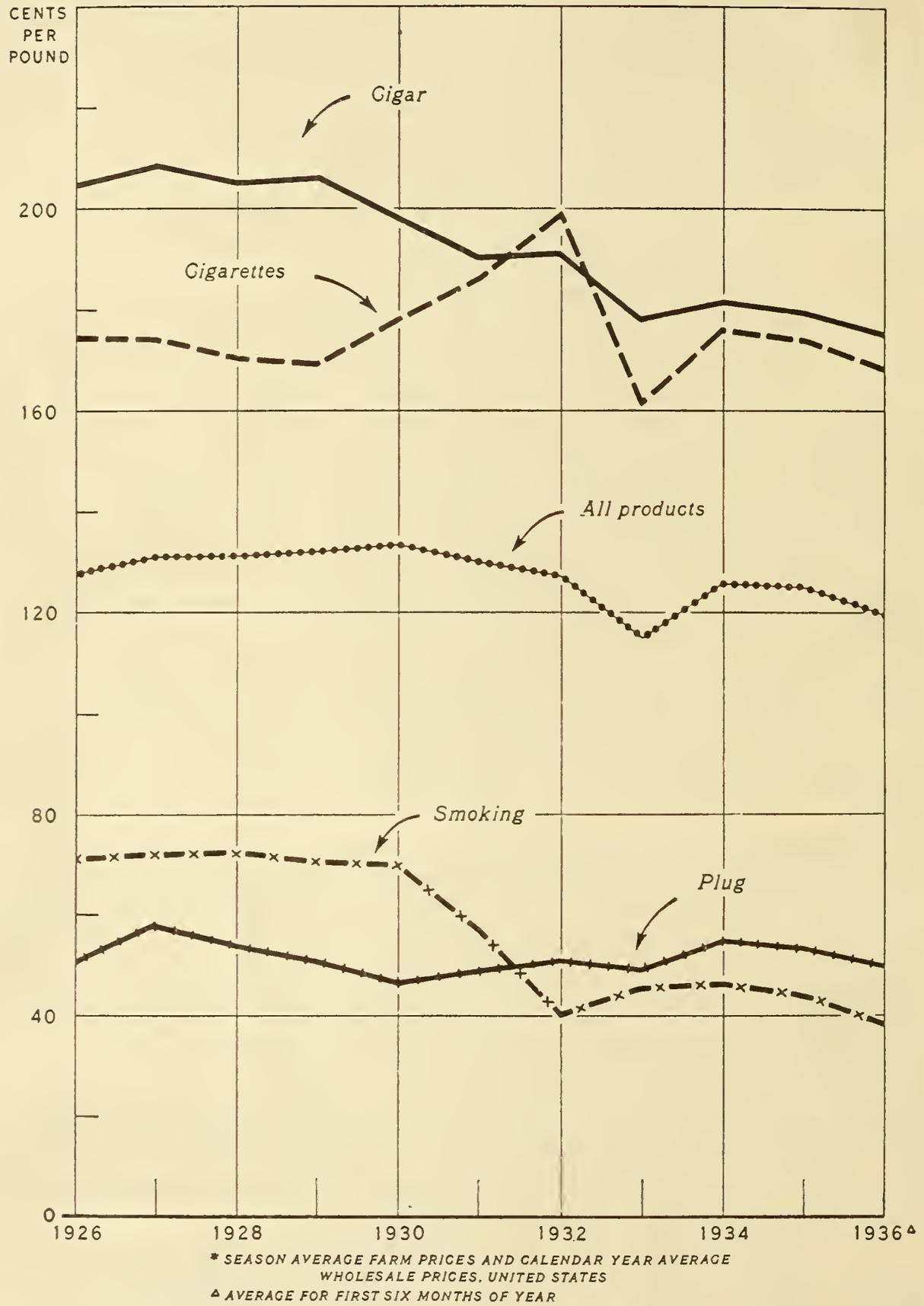


FIGURE 17.

circumstances, but that for cigars and smoking tobacco they were not sufficient fully to cover the taxes. The relation of demand conditions to this situation will be discussed later. It is sufficient, at present,

to point out that those companies which produce several kinds of tobacco products, may have shifted the tax on all, by raising the price on only one or two of the products by an amount sufficient to cover any portion of the tax on other products which was not directly shifted.

Some light may be shed on the problem by referring to the wholesale prices themselves (table 25 and fig. 18). The price of smoking tobacco remained constant at 57 cents per pound from January 1933 to June 1936. Changes in the margin were due entirely to changes in the farm price. The price of plug rose in November 1933 from 59 cents per pound to 64 cents per pound, where it remained for the rest of the period. Cigarettes rose 12 cents per pound in price in January 1934 and 4 cents more in February, remaining at this level ($1.87 per pound) for the rest of the period. The cigarette prices quoted are monthly average prices for the standard brands. Although monthly average prices show two increases, the whole of the price increase actually took place on the 9th of January. Cigars rose 2 cents in October 1933, but fell again in April 1935, after some minor fluctuations, to a level slightly lower than before the rise.

Only the price rise for cigars coincided with the imposition of the tax, but it is probable that the tax was a factor in the price increases for cigarettes and plug tobacco a few months later. The sharp decline in wholesale price and manufacturers' margin for cigarettes during 1933 was due, in large part, to the development of the 10-cent cigarette. Competition from these low-priced brands was minimized following, and at least partly as a result of, the imposition of the tax. For this and other reasons, manufacturers were able to raise the price on their regular cigarette brands, thus widening their margins.

It is important to note that the marketing agreement for flue-cured tobacco, in effect from September 25, 1933, to March 31, 1934, contained a consumers' provision by which the various manufacturers agreed not to raise the price of cigarettes above the price on January 3, 1933, plus an amount equal to any increase in costs due to processing taxes, N. R. A. policies, or increased raw material costs. The list price of the popular brands on January 3, 1933, was $6 per thousand. On January 9, 1934, the price was increased from $5.50 to $6.10 per thousand, or 10 cents above the base price. Although the marketing agreement resulted in higher prices for tobacco, this did not mean increased costs for the cigarettes being manufactured at that time because the tobacco purchased during the 1933–34 marketing season would not enter into manufactures for at least a year. There may have been some increases in costs due to the N. R. A. (the code for the tobacco industry was not signed, however, until February 1935), but the exact amount would have been difficult to determine. On the other hand, the cost of the processing tax under the existing rates could be directly computed, and was added by manufacturers to the base price. From data contained in the Report of the Commissioner of Internal Revenue for the fiscal year 1934–35, the amount of tobacco used in the manufacture of 1,000 cigarettes during the calendar year 1933 has been determined. On the average, 0.41 pounds of unstemmed tobacco and 1.82 pounds of stemmed tobacco (including scraps, cuttings, and clippings) were used. Using the percentages of flue-cured, burley, and Maryland listed for cigarettes in table 21, and the corresponding processing tax rates (table 19), we find that the cost of the processing tax was slightly less than 10.3 cents per 1,000.

The fact that the preceding analysis applies only to the *average* manufacturer must be emphasized. Prices used are all average prices; it has been shown that tobacco is stored a little over 2 years "on the

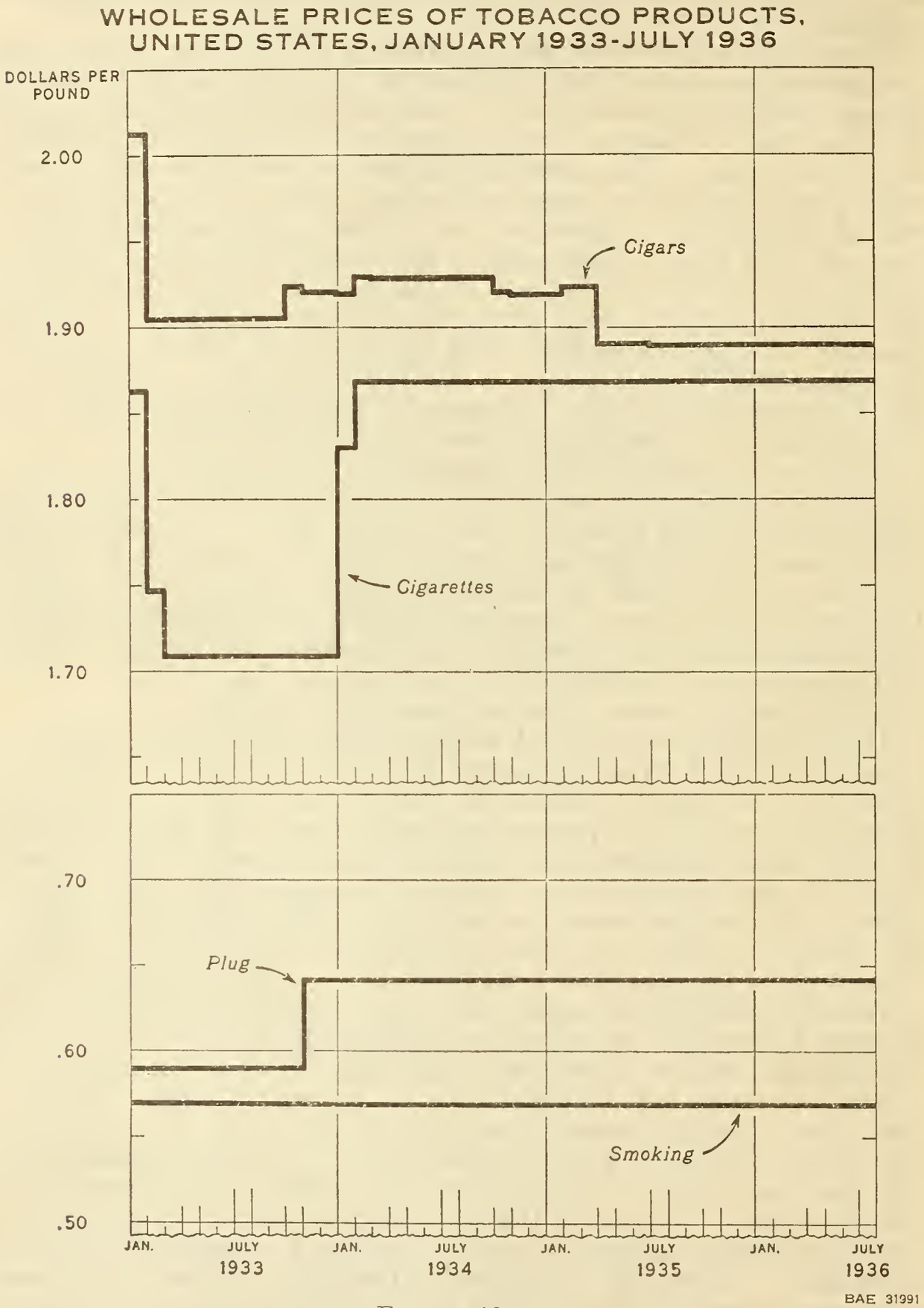


FIGURE 18.

average"; and the proportions of various types of tobacco which have been used as going into the manufacture of the various products are average proportions.

Attention should be called to the fact that the analysis of processors' margins in this study has been based on the assumption that the

quality of tobacco products has remained the same throughout the period under consideration. The manufacturer can increase his margin by raising the price of the product, but he can also achieve the same result by using cheaper raw materials. This study has given no consideration to the latter possibility since the necessary information is lacking.

EFFECTS OF THE TOBACCO-PROCESSING TAX ON DISTRIBUTORS

There is no evidence that distributors of tobacco products bore the tax. Changes in wholesale prices have generally been accompanied by corresponding changes in retail prices, the retailers' margin remaining approximately the same. Wholesale-retail price spreads or

SPREADS BETWEEN WHOLESALE AND RETAIL PRICES OF TOBACCO PRODUCTS, UNITED STATES, 1926-36

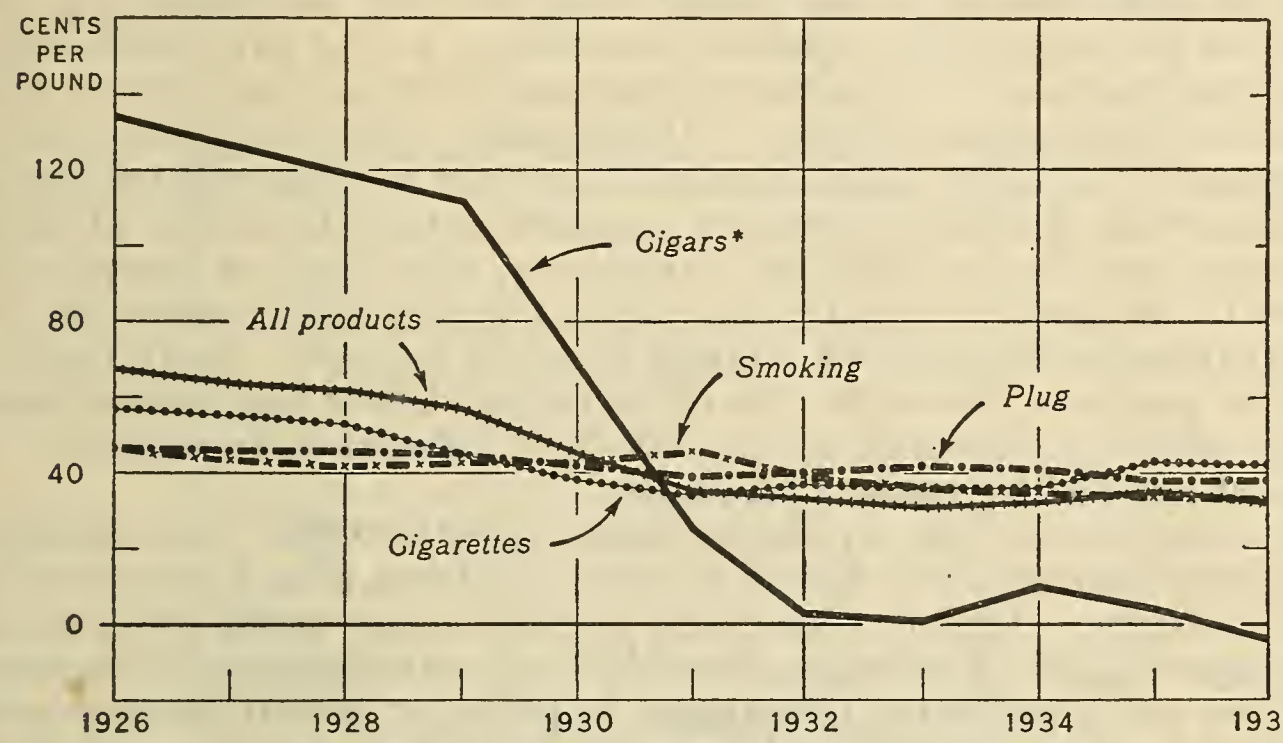


FIGURE 19.

margins for the several products are given in table 26 and charted in figure 19. There were marked changes in the spreads during the earlier years, notably in the case of cigars; but since 1932, they have been more stable, on the whole, than either retail or wholesale prices.[12] Only in the cases of smoking tobacco and plug were the average spreads lower for the years 1934 and 1935, than for 1933 and the first half of 1936. The retailers' margin for smoking tobacco was 0.5 cent lower during the tax period, while the average tax for this product was 3.8 cents. For plug, the retailers' margin was 1.2 cents lower, while the average tax amounted to 2.7 cents. For cigars and cigarettes the spread actually averaged higher during the processing-tax period than during the periods immediately before and after.

[12] The cigar margins for the years following 1931 are obviously too low; in 1936 the retail price is actually lower than the wholesale price. This is due to the inclusion of cheaper types of cigars in the retail averages during the later years. Both retail and wholesale prices were obtained from the Bureau of Labor Statistics. The retail prices were collected by the Bureau for the purpose of measuring cost-of-living changes; consequently, when consumers shifted to cheaper types of cigars during the depression years, greater weight was given to these types in the retail average. On the other hand, in obtaining the wholesale averages, the same types were used for all years since 1926; and as a result the wholesale prices since 1931 are too heavily weighted by the higher priced types. Although the spread between these two series of prices clearly does not represent the retailers' actual margin, it is probable that the fluctuations in the former are indicative of fluctuations in the latter. This discrepancy occurs only in the case of cigars.

EFFECTS OF THE TOBACCO-PROCESSING TAX ON CONSUMERS

To determine definitely whether part or all of the tobacco-processing tax was passed on to consumers, or was taken from the price paid to producers, it would be desirable to know the elasticity of demand for the several tobacco products and for all tobacco.

It should be noted, first, that if the cost of the processing taxes on the tobacco used in the manufacture of each tobacco product were added to the wholesale and retail prices of that product, the resulting price increases would represent smaller percentage increases for some products than for others. For example, cigarettes and granulated smoking tobacco contain similar proportions of flue-cured, burley, and Maryland tobaccos, and consequently the processing-tax cost per pound was about the same for the two products; but, since the retail price of granulated smoking tobacco averaged less than one-half the price of cigarettes on a per pound basis in 1933, an increase in the prices of the two articles equal to the tax cost would have been only a 2-percent increase for cigarettes compared with an increase of over 4 percent for smoking tobacco. Disregarding differences in elasticity of demand, consumer resistance to an increase in price will tend to be in proportion to the percentage increase rather than the absolute increase; and there would be a tendency, therefore, to increase the prices of all products about the same percent, thus increasing the more expensive products by a larger absolute amount. In the case of tobacco products, however, the effect of this factor has been at least partly offset or obscured by the effect of differences in elasticity of demand among the various products.

An analysis of the available data indicates that the domestic consumer-demand curve for all tobacco products is of approximately unit elasticity. That is, changes in quantities consumed offset or are offset by changes in price, so that the total expenditures for tobacco products are not affected by changes in prices or quantities consumed which are not brought about by changes in the general demand situation. This would be true if variations in total consumer expenditures for tobacco were accounted for by changes in the income of consumers, for in that event it would be demonstrated that changes in the quantity consumed offset changes in price, under constant demand conditions. This relationship for all tobacco products combined is shown in table 27 and figure 20. Although there is intercorrelation between prices and consumer incomes, this is materially less than the correlation between per capita expenditures for tobacco products and the measure of consumers' income, so the analysis does indicate unit elasticity.

The fact that the demand for tobacco products seems to be of unitary elasticity within the usually encountered range of prices leads to the conclusion that the processing tax on tobacco could readily be shifted to consumers. An increase in the average price of all tobacco products by an amount equal to or greater than the tax probably would not materially change the gross income of manufacturers. If anything, such gross income would be increased, since it has been shown that distributors' unit margins remain the same with changes in volume, and hence a somewhat smaller total cost of marketing would be subtracted from an unchanged amount paid by consumers. However, the reduced consumption resulting from the higher price would result in lower total manufacturing costs, including the cost of materials,

thus offsetting wholly or in part the tax payments. Thus, tobacco manufacturers as a group could have passed the tobacco-processing taxes on to consumers by raising prices, which in turn would have reduced consumption, would have left gross income the same, but would have decreased the aggregate of other costs of the manufactured products by an amount equivalent to the tax.

The question naturally arises, if manufacturers could do this following the levying of the processing tax, why would they not have as much incentive to do it without the tax; or in other words, why would not manufacturers already be pricing their products so as to return a maximum net income? The most logical explanation seems to be

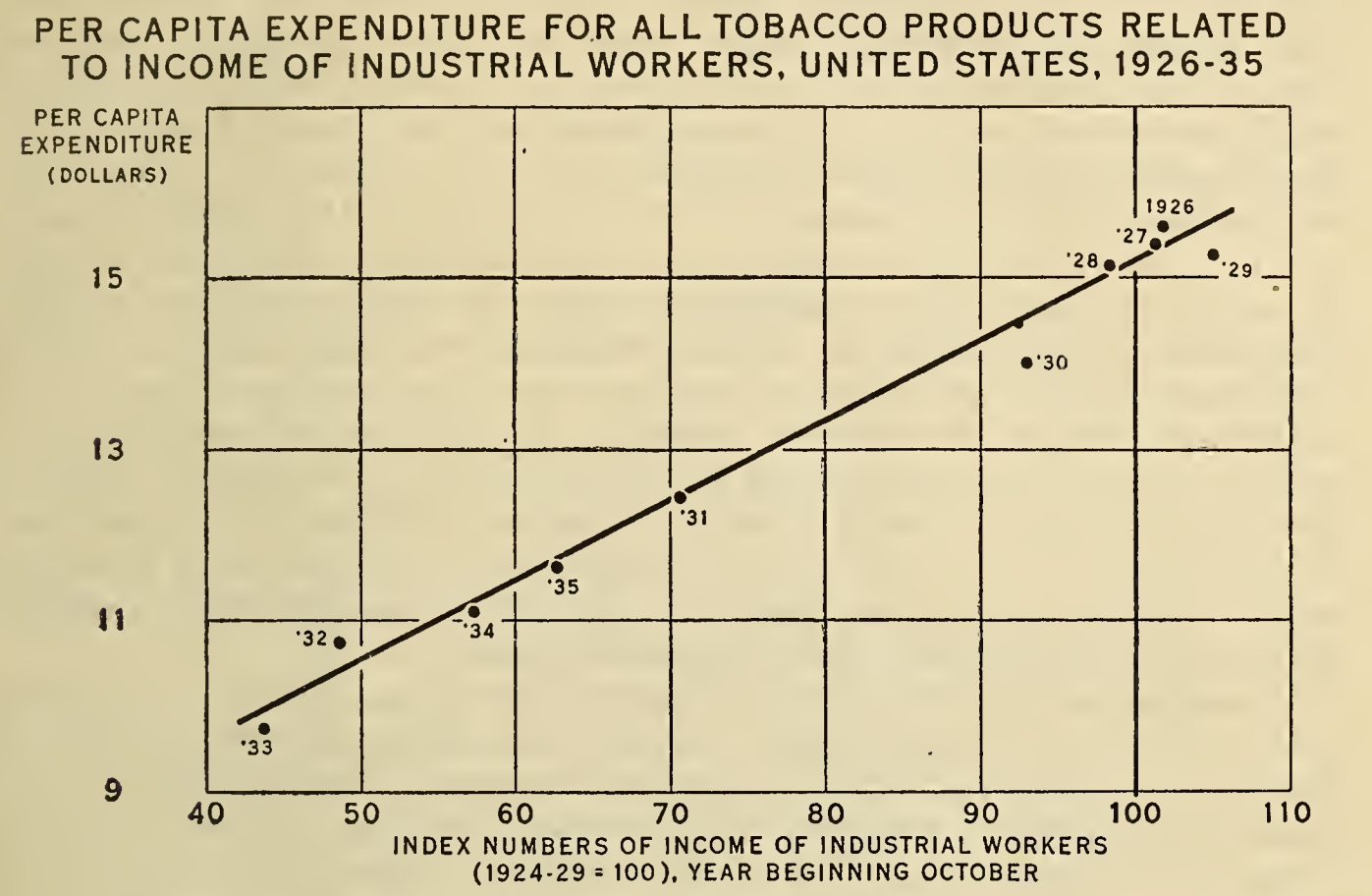


FIGURE 20.

that severe price competition with reference to certain tobacco products, somewhat uncommon for the industry, existed during the period just prior to the levying of the processing taxes. The taxes made it more difficult for some of the price-cutting units of the industry to operate, thus permitting the rise in price. In view of these conditions, and the previous analysis of processors' and distributors' margins, it appears probable that tobacco processors as a group not only could but actually did pass on to consumers a large part if not all of the processing taxes.

In analyzing the situation with respect to the several individual tobacco products, however, it is now impossible to determine statistically the elasticities of demand. The difficulty arises mainly because of the high degree of correlation between the several variables which would be logical factors to use in explaining changes in per capita consumption. Two of these variables are price and consumers' income. This makes the several regression lines indeterminate, including that representing the relationship between changes in prices and changes in consumption. Serial correlation between the observations representing consumption of the several tobacco products also

constitutes an obstacle to such statistical analyses, in view of the limited number of years for which price data are available.

Analyses for the several tobacco products similar to that in figure 20 for all tobacco products, indicate that the demand for each of these products is not of unitary elasticity. In other words, the unit elasticity of demand for all tobacco products is a result of less than unit elasticity of demand for some products and greater than unit elasticity for others. From this point it becomes necessary to resort largely to deductive reasoning.

The demand for cigarettes probably is very much less elastic than the demand for all tobacco products, with a comparatively large increase in price resulting in only a slight decrease in consumption. This conclusion is based partly upon indirect statistical evidence. Even with intercorrelation present between changes in price and in the other variables used in tentative statistical analyses of the factors affecting the per capita consumption of tobacco products, it was found impossible to derive a demand curve of material elasticity, although in the case of similar analyses for other tobacco products demand curves of considerable elasticity could be adduced, even though indeterminate because of intercorrelation between the variables. Variations in the per capita consumption of cigarettes appear to be explained almost entirely by changes in the incomes of industrial workers and an upward trend in cigarette consumption which is apparently closely related to shifts from other types of tobacco products to cigarettes.[13] With price apparently having very little immediate effect on consumption, there would be no difficulty in shifting the tax to consumers in the case of cigarettes.

Consideration of changes in the relative consumption of different tobacco products, particularly during and following the depression, seems to indicate that the demand for cigars is more elastic than for tobacco products as a whole. A statistical analysis indicates that the demand for cigars could be elastic, although the exact slope of the regression line is indeterminate because of the intercorrelation between the independent variables. In view of this presumably elastic demand for cigars, it is obvious that any attempt to make the consumers of cigars bear the processing tax would encounter difficulties.

In the case of smoking tobacco, there was an actual increase in consumption during two of the worst years of the depression, evidently because of its price appeal. Although it is possible for a commodity to have an inelastic demand and at the same time to have this demand shift materially as a result of changes in consumer incomes, the general circumstances surrounding the use of smoking tobacco indicate that it is a product to and from which a considerable group of consumers may shift in response to changes in price. If this assumption of an elastic demand for smoking tobacco is correct, it would be difficult for manufacturers to shift all of the tax to consumers.

Apparently the demand for chewing tobacco is rather specialized. That is, there is relatively little shifting from chewing to other types of tobacco, or vice versa. There is a marked downward trend in the

[13] The same conclusion is reached by E. H. Schoenberg in "The Demand Curve for Cigarettes", an article in the Journal of Business of the University of Chicago, January 1933, pp. 15–35. Mr. Schoenberg relates annual per capita consumption to wholesale prices of one popular brand of cigarettes for the period 1913–31. Other variables considered in the analysis were the general level of wholesale prices, the annual expenditures of the four leading cigarette companies for newspaper advertising, and the upward trend in cigarette consumption. He concludes that the demand curve was inelastic for the period studied and that it tended to become even less elastic with the passage of time because of the upward trend in consumption.

per capita consumption of chewing tobacco, which apparently has not been appreciably retarded or accelerated by changes in consumers' purchasing power. In view of these conditions and the well-known conditions surrounding the use of chewing tobacco, it may be assumed that the demand for chewing tobacco is relatively inelastic, and hence that the tax on this product might readily be shifted to the consumers.

The foregoing analysis leads to the conclusion that, with a given level of income, consumers tend to spend about the same amount of money for tobacco products regardless of price. However, the demand curve of unitary elasticity for all tobacco products is apparently composed of relatively inelastic demand curves for cigarettes and chewing tobacco, and relatively elastic curves for cigars and smoking tobacco. Although statistical analyses of the several products which have been made do not yield results contradictory to these deductive conclusions, the high degree of intercorrelation between the independent variables and of serial correlation in the dependent variable prevents them from constituting any satisfactory proof of the hypotheses, despite the high degree of apparent correlation.

If the probable elasticities of demand for the several products are correct, they afford an explanation for the changes in price and manufacturers' margins for the various products that have been discussed. The average wholesale price of cigars was raised in October 1933, although not by an amount sufficient fully to cover the tax. This price was reduced again in April 1935, while the tax was still in effect, indicating that the rise in price had met with consumer resistance. Although the margin rose slightly for smoking tobacco because of the lower cost of raw materials, no attempt was made at any time to raise the price. But the assumed relatively elastic demand for cigars and smoking tobacco is not the only factor tending to prevent a complete shift to consumers of the tax on these products. The downward trend over a longer period of time in consumers' demand for these products has necessitated lower prices during recent years in an attempt to counteract its effect. Reference to table 26 shows that there has been a marked downward tendency in cigar prices for the last 8 or 9 years. The price of smoking tobacco dropped sharply between 1930 and 1932 and has since remained at a level much lower than before. On the other hand, there has been no marked trend, either upward or downward, in prices of cigarettes or chewing tobacco. The same generalizations hold true for manufacturers' margins (fig. 17).

The probable inelastic demand for cigarettes indicates why the price could be raised 16 cents per pound, as it was early in 1934, without arousing any appreciable consumer resistance. In fact, the inelastic demand, coupled with increasing consumer preference for cigarettes, puts the manufacturers of this product in a very favorable position. Similarly, the increase of 5 cents per pound in the price of plug chewing tobacco during November 1933 is understandable in light of the probable inelastic demand for that product.

EFFECTS OF THE TOBACCO-PROCESSING TAX ON PRODUCERS

A comparison of average prices paid to tobacco growers during 1934 and 1935 with prices paid in previous years (table 28) leads to the conclusion that no part of the processing tax was shifted backward to producers. The average price for the 1934 crop was 21.4 cents,

higher than for any year since 1922. In 1935 the price fell to 18.3 cents, but it was still higher than for any year since 1929. The supplies of tobacco for these years were considerably above normal, a situation which would ordinarily lead to lower prices. In view of the relatively high prices received by producers, and the previously considered evidence that consumers bore the tax, there is no reason to believe that prices to producers would have been any higher in the absence of a tax.

SUMMARY AND CONCLUSIONS

As the tobacco-processing tax was small relative to wholesale and retail prices, to price margins, and to profits made by the tobacco industry, it is difficult, using available data, to determine precisely the incidence of the tax. There are a large number of circumstances, however, pointing to the conclusion that by far the larger part of the processing tax on tobacco as a whole was not paid by the processors or manufacturers of tobacco products.

There is little or no evidence that the distributors of tobacco products bore any part of the tax, since retail prices generally moved in the same direction, and by approximately the same amount, as wholesale prices.

There are no indications that tobacco producers paid the tax. The average farm price of tobacco rose sharply, and to a point considerably above what would have been expected under similar supply and demand relationships prevailing during the last 10 years.

Although the evidence is not quantitatively conclusive, it appears that a large part if not all of the tax was passed on to consumers.

The margin between the wholesale price of cigarettes and the average farm price of the tobacco used rose in 1934 and 1935 more than enough to cover the amount of the tax. The same is true of plug chewing tobacco. On the other hand, the margins for cigars and smoking tobacco rose, but by an amount insufficient to cover the tax.

Since most of the large tobacco-manufacturing companies produce a variety of products, it is possible that cigarette consumers bore part of the tax on other tobacco products, as well as the tax on cigarettes. The fact that the increase in the margin for cigarettes was almost three times the average tax, and the fact that the demand curve for cigarettes appears to be comparatively inelastic, lend support to this conclusion.

CORN

THE CORN-PROCESSING INDUSTRIES

Corn is processed into a considerable number of finished products, in three more-or-less distinct corn-processing industries: (1) The wet-process industry, composed of manufacturers of starch, sirup, sugar, oil, feed, and other corn derivatives; (2) the dry-milling industry, which prepares meal, grits, hominy, and feed; and (3) the distilled spirits and alcohol industry, which uses corn in the making of grain alcohol and whisky. A processing tax of 5 cents per bushel on corn processed in any of these ways was effective from November 5, 1933, to January 6, 1936.

WET-PROCESS INDUSTRY

Changes in the price of corn ordinarily encountered are not a significant factor in influencing the quantity of corn processed into the multitude of items merchandised by the wet-process industry, pro-

vided a reasonable price relationship obtains between each corn product and its respective competitor or competitors. If the relationship between a particular corn product and its competitive product favors the corn product, the outlet for the latter will tend to increase; but if the corn product is relatively expensive compared with its competing product, the amount of the corn product that will be taken may be reduced. Efforts may be made by certain manufacturers, however, to maintain a competitive price of a certain product by shifting a part of the price burden to a corn product which is in a more favorable price position.

A number of factors entered into the situation during the period in which the processing tax on corn was in effect, somewhat altering the competitive position of several important products. No compensating tax was placed on tapioca, a duty-free farinaceous substance which competes with cornstarch to a limited extent. During recent years the price of tapioca has declined more than the price of cornstarch. With relatively lower prices of tapioca, the proportion of total starch requirements filled by tapioca has increased.

Cane sugar and cane sirup are the chief competitors of corn sugar and corn sirup. Corn sugar and corn sirup were in a favorable competitive position relative to cane sugar in most of the early 1920's (table 29). These corn products were adversely affected in 1929 and 1930 by a combination of declining sugar prices and the short corn crop of 1930. In 1931 and 1932, prices of corn products declined more rapidly than prices of cane sugar and were at a relatively lower level in 1932 and 1933. With the short corn crop of 1934, and the accompanying high prices of corn in 1934–35, prices of corn sirup and corn sugar were relatively higher than cane sugar. Sales of corn sugar in 1935 showed a decline of 43 percent compared with those in 1934; and sales of corn sirup declined 5 percent.

Variations in the spread between the value of the principal corn products of the wet-process industry and the price of corn must be interpreted in the light of these developments. The wholesale value of the major corn products (starch, oil, and feed) and the price of No. 3 corn, all Chicago basis, are given in table 30 and figure 21, together with the spread between these two items. The average of the spread between the value of the given corn products and of corn was 54.9 cents during the period October 1931 to October 1933. This period is sufficiently long to be representative. The average spread during the period of the processing tax was 60.5 cents per bushel. The average spread, therefore, increased 5.6 cents, or slightly more than the amount of the processing tax of 5 cents. In the last half of 1935 the spread advanced, reaching a level in November and December above 70 cents, and in January after the removal of the processing tax it declined to an average of 66 cents, in February to 60 cents, and averaged 60 cents for the first 7 months of 1936.

The proportion of the total corn crop used by the wet processors was so small (only 4 percent in 1934–35) that their activities could not materially affect the level of corn prices. But table 31 shows that the wet-process grindings in 1934–35 were about 55 percent of the receipts of corn at the principal markets compared with 35 percent in 1933–34. This percentage was so large as to affect the premium of cash corn over the futures, but it is very unlikely that the basis of the future was influenced.

Examination of the spread prior to the application of the tax indicates that the industry may have anticipated the tax before it went into effect. It was known in July 1933 that a processing tax would be applied to corn. The act was passed in May, and the work toward a corn-hog program was under way in June and July, although the rate of tax was not known at that time.

There are a number of factors other than the tax which tended to increase the spread. The price of mine-run coal in the tax period (November 1933 to December 1935) was 15 percent greater than in the pre-tax period (January 1932 to October 1933). Likewise, prices of cotton, burlap, and jute bags advanced. Wages were also advanced in the summer of 1933 and the spring of 1934.

PRICE OF CORN AND WHOLESALE VALUE OF CERTAIN WET PROCESS CORN PRODUCTS*, CHICAGO, AND SPREAD BETWEEN PRICE AND VALUE, OCTOBER 1931-JULY 1936

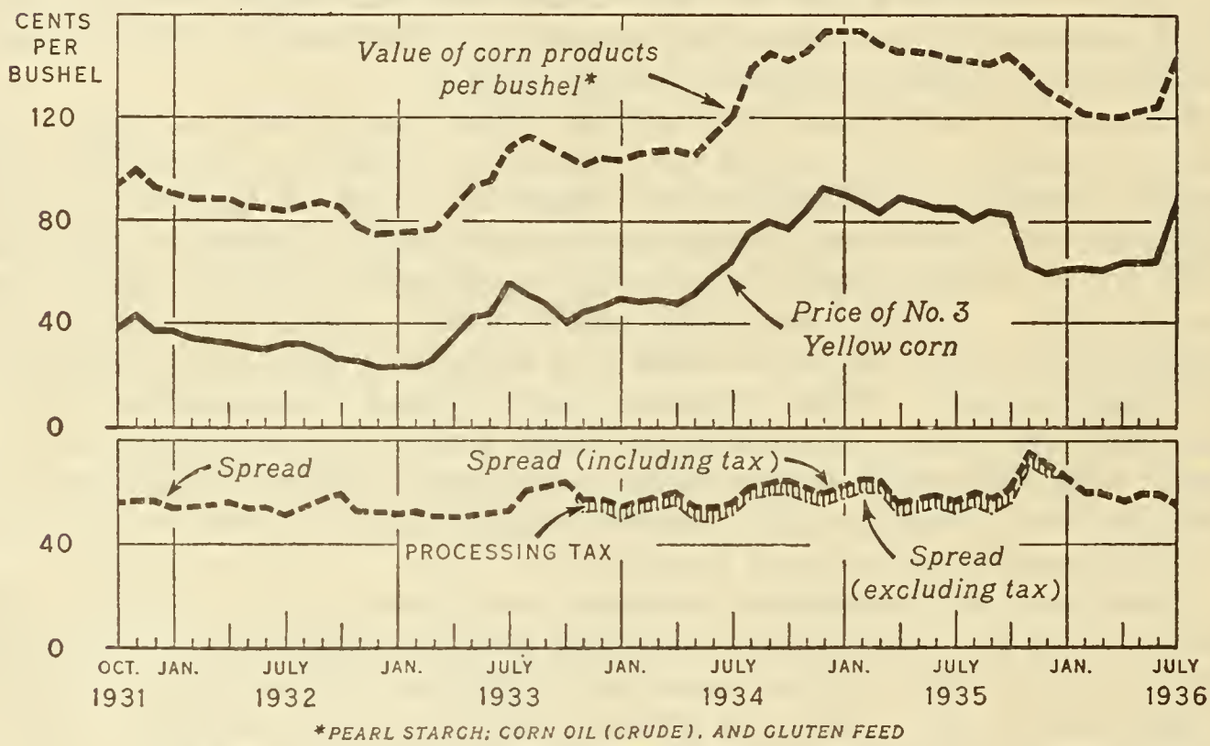


FIGURE 21.

The above analysis includes only starch and the oil and feed by-products. Starch represents about one-third of the total output of the main products, the other two-thirds being corn sirup and corn sugar. The latter are produced by chemically processing cornstarch. When the processing tax was first applied in November 1933, the average weekly prices of corn sirup were advanced 13 cents, 70° sugar 12 cents, and 80° sugar 13 cents, per 100 pounds. On January 7, 1936, after the Agricultural Adjustment Act was declared unconstitutional, the prices of the products of the wet-process industry declined in the same proportion to 100 pounds of product as their turnout per bushel was to the tax of 5 cents per bushel of corn of 56 pounds.

As the demand for the products of this industry did not increase during the tax period, but probably was shifted in part to substitute products, the larger spread probably was partially due to the increase in costs other than corn. The per-bushel amount of these increased costs is not definitely known, but it is probable that they account for the increase in the spread which was in excess of the amount of the tax of 5 cents per bushel.

DRY-PROCESS INDUSTRY

The dry-process industry includes the manufacture of meal, flakes, grits, hominy, and feed, and differs considerably from the wet-process industry. A much smaller capital investment per bushel of corn processed is necessary, and the process is much less complex than that of cornstarch manufacture. Thus the price spread between corn and the finished products of the dry-milling industry is much less than that for the wet millers.

Grits and other products of the dry millers have not been affected by adverse competition to the same degree as wet-process products. One of the largest users of corn grits and flakes is the brewing industry, and competition here is largely with brewers' rice, a byproduct of

PRICE OF CORN AND WHOLESALE VALUE OF CERTAIN DRY PROCESS CORN PRODUCTS*, NEW YORK, AND SPREAD BETWEEN PRICE AND VALUE, OCTOBER 1931-JULY 1936

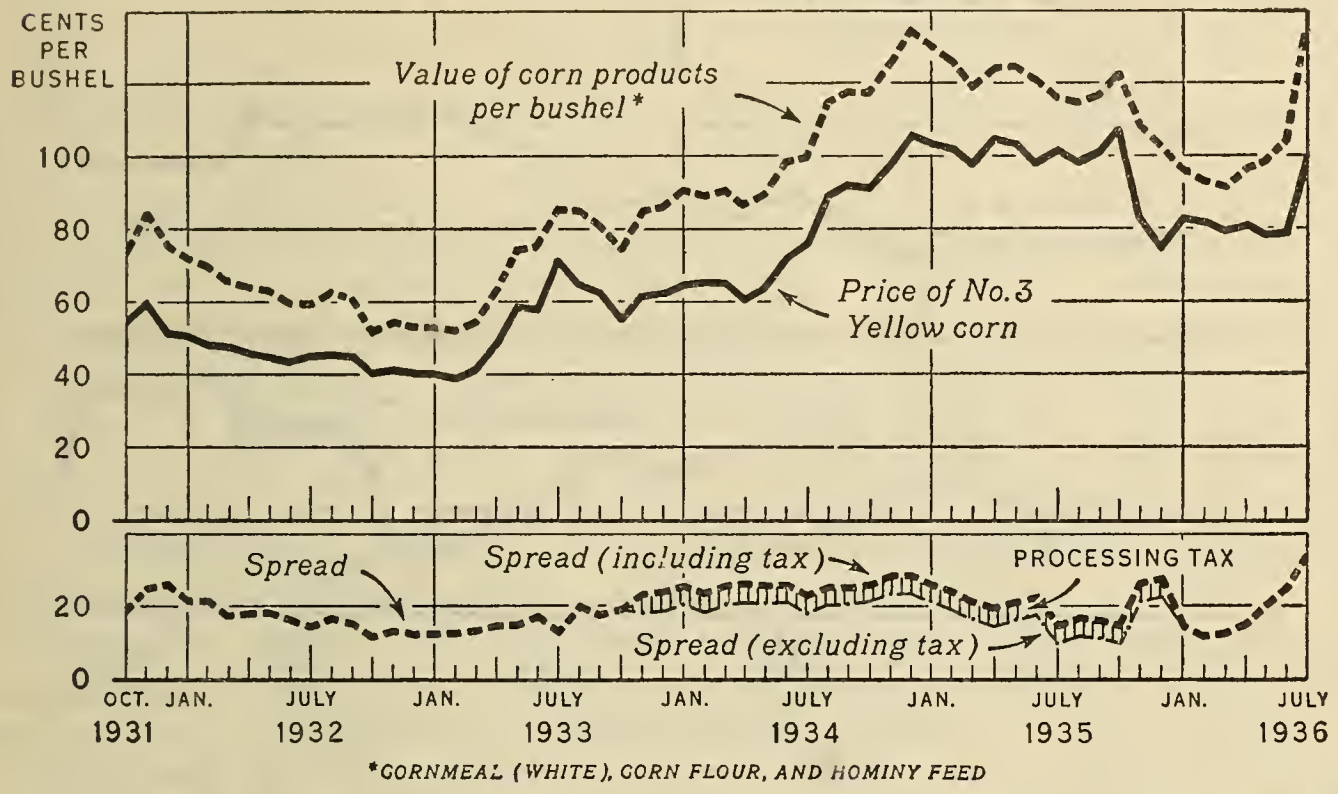


FIGURE 22.

rice milling. Rice was declared a basic commodity under the Agricultural Adjustment Act, and near-parity prices were established through marketing agreements until April 1935, when a processing tax of 1 cent per pound, rough basis, went into effect. Other products, such as corn flakes of the breakfast-food type, hominy, etc., met competition as usual from other foods.

The value of meal, flour, and feed per bushel is compared with the price of corn per bushel at New York in table 32 and figure 22. The average spread from October 1931 to October 1933 was 17.0 cents, whereas during the application of the tax, from November 1933 to December 1935, it was 23.4 cents. The difference of 6.4 cents is greater than the amount of the tax of 5 cents per bushel.

Like the wet-process industry, the dry millers paid higher prices for burlap, jute, and cotton sacking, and for coal, but the use of coal per bushel of grain processed is less for the dry millers than for the wet. A part of the explanation of the increased spread is in the improved demand for grits and flakes from the beer industry. Under the act permitting the manufacture of 3.2 percent beer which became effective

April 7, 1933, production of fermented malt liquor increased greatly. Restricted imports of brewers' rice during the short period (April 1, 1935, to January 6, 1936) of the rice-processing tax probably lessened the competition between corn grits and rice in the brewing trade.

Under these circumstances, it is difficult to determine for the industry as a whole what parts of the higher prices and spreads were the result of the tax (and hence constituted a shifting of the tax by the dry-corn millers), and what part of the increases would have occurred in any event as a result of other circumstances. It is probable, however, that the combined effect of increased processing costs, together

PRICE OF CORN AND WHOLESALE VALUE OF ALCOHOL, NEW YORK, AND SPREAD BETWEEN PRICE AND VALUE, OCTOBER 1931-JULY 1936

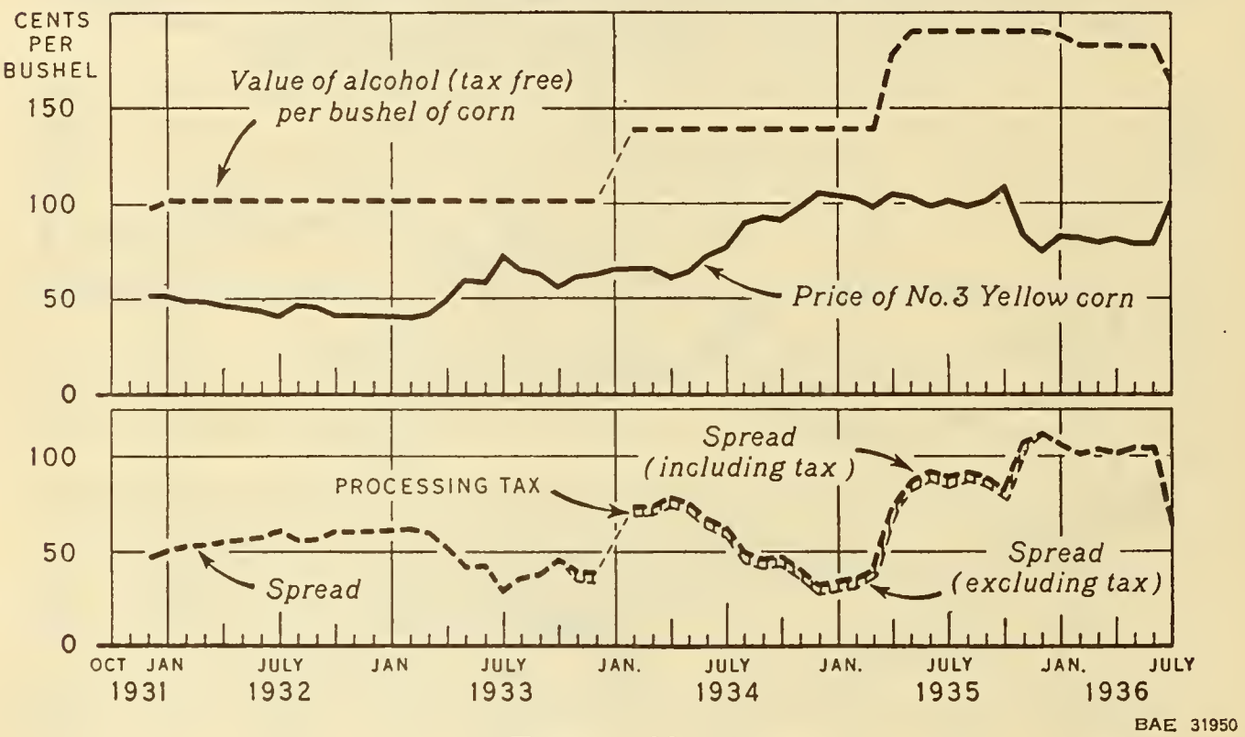


FIGURE 23.

with any increase in demand, accounts for that part of the increase in the spread which was in excess of the amount of the tax.

ALCOHOL INDUSTRY

Corn, in conjunction with other commodities, is used in the making of ethyl grain alcohol. In the fiscal year 1935 about 1,177,000 bushels of corn were used in the production of ethyl grain alcohol. Table 33 and figure 23 give a comparison between the wholesale value of alcohol per bushel of corn and corn prices at New York City and show the spread between them from December 1931 through July 1936. The alcohol prices are on a tax-free basis and are converted on a basis of 2.5 gallons per bushel of corn. Because of the constancy of the price of alcohol for considerable periods of time, variations in the spread are due to fluctuations in the corn price. Prior to the application of the processing tax, December 1931 to October 1933, inclusive, the spread was 52.0 cents per bushel, and during the period in which the tax was assessed 66.7 cents, a difference of 14.7 cents per bushel. This is 9.7 cents more than the tax. This spread advanced sharply during 1935, reaching a high point of $1.15 in December. Following the removal of the tax, this spread dropped to an average of $1.06

in January, $1.01 in February, and an average of $0.98 for the first 7 months of 1936.

Demand for grain alcohol evidently improved during the period, since larger quantities were produced and consumed at the higher prices. Distilled spirits provide a considerable outlet for grain neutral spirits. Consumption of distilled spirits in the early part of the 1933–34 season beginning with July averaged about 250,000 proof gallons and in December was 8,219,000 proof gallons. Production from the beginning of the 1935–36 fiscal year (July 1935 to January 1936), was 72 percent greater than in the same months of 1934–35.

Again, it is difficult to demonstrate for the industry as a whole what part of the increased processors' spreads and product prices were the result of the tax, and hence constituted a shifting of the tax by the manufacturers, and what part of the increases would have occurred in any event as a result of other circumstances.

EFFECTS OF THE CORN-PROCESSING TAX ON PRODUCERS AND CONSUMERS

The processing tax on corn did not affect appreciably the price received by producers for corn. Changes in the price of corn are affected principally by the general price level, the supply of corn, and the numbers of livestock. The quantity of corn processed is determined largely by demand conditions, which may be measured by national income or general business activity. Changes in the quantity of corn used commercially are not closely related to, or associated with, changes in the price of corn. An alteration of the industrial demand for corn products as the result of the tax may have affected the quantity of corn processed. But the net effect on the price received by the producers was negligible, since industrial utilization of corn is very small in comparison with the total utilization for all purposes or with the corn grain supply.

As the tax could not have been passed back to producers in the form of appreciably lower prices for corn, it follows that the tax, insofar as it was not absorbed by processors, was passed on to consumers.

Measurement of the effect of the processing tax upon the consumption of corn products by consumers is difficult to determine because the spread between the retail and the wholesale prices of those corn products sold in retail markets is so wide and the tax is so small in comparison. In the case of corn meal, for example, the spread between the retail and the wholesale prices at New York, 1932–35, was from $3.50 to $3.75 per 100 pounds. The processing tax of 15 cents per 100 pounds is relatively small compared with this spread. The spread in the case of corn sirup is even wider than in the case of corn meal, and the tax per 100 pounds of product is less. Retail prices of corn sirup were not available prior to January 1934, but from this date to the termination of the tax, the spread between the retail and the wholesale price at New York varied between $5.25 and $6.25 per 100 pounds. This spread included the cost of the can in which the product was sold to the consumer. The tax was about 13 cents per 100 pounds of product. The spread between the retail prices of corn flakes and the wholesale price of corn grits from which they are made is about $14 per 100 pounds. These facts indicate, even if they do not positively prove, that the tax was so small in relation to prices paid by both industrial and individual consumers of these corn products as to make possible a shifting of the tax to consumers without any appreciable effects on consumption.

SUMMARY AND CONCLUSIONS

An analysis of the spreads between the price of corn and the prices of the principal finished products manufactured in the corn-processing industries, before, during, and after the imposition of a processing tax on corn, indicates that the spreads increased during the period of the tax by amounts more than sufficient to cover the processing tax. This was true of the wet-process, dry-process, and alcohol industries. The larger spreads received after the tax was instituted may be accounted for in part by increases in costs other than corn and changes in the competitive situation of the corn-processing industries. For this reason, it is impossible without a careful study of processing costs to determine definitely how much of the increased spread was a reflection of the processors' ability to shift the tax.

The corn-processing industries consume only about 6 or 8 percent of the total corn crop, and it may be concluded that the operations of corn millers have a negligible effect upon the price of corn, although when the takings represent a considerable part of the receipts of corn at the principal markets the premium of cash corn over futures may be affected. Prices received by producers for corn, however, in general seem to be influenced most by changes in the price level, in the total supplies or production of corn, and to some extent by numbers of livestock available for feeding. It may be concluded, therefore, that the processing tax on corn had a negligible direct effect upon corn prices. Thus, producers did not pay the processing tax on corn, and the amounts received by them from the fund derived from the processing tax represented a net gain in income.

Since the tax was not passed back to producers, it follows that such part of the processing tax as was not absorbed by processors (see previous sections) was paid by consumers of corn products through higher prices than otherwise would have been paid for those products, or possibly was absorbed in part by middlemen between processors and consumers. The very small amount of the tax in relation to retail prices and middlemen's margins prevents accurate determination of this point.

RICE

RICE CONTROL BY MARKETING AGREEMENTS

Marketing agreements for rice in California and in the South became effective, respectively, in September and October 1933. Under these agreements the mills agreed to pay to rice growers minimum prices established by the Secretary of Agriculture. The initial prices proclaimed under the agreements were approximately parity. The millers and the Secretary also agreed to certain charges for milling the rice, and in the South to set aside money to be used for the development of markets for American-grown rice. The millers' and growers' organizations agreed to a plan of production control, which was first effective for the 1934 season.

An amendment to the Agricultural Adjustment Act with respect to rice was enacted by Congress on March 18, 1935, effective April 1, 1935, providing for a processing tax of 1 cent per pound on rough rice. To make effective, during the period April 1 to August 1, 1935, the export drawback feature only, two provisions were included in the amendment: (1) The issuance of tax-payment warrants, and (2) the elimination of the floor-stocks tax. Warrants were issued to the

holders of rough rice on April 1, which were used to pay the processing tax on rice milled after April 1. This eliminated the payment of a cash tax on old-crop rice. Cash payment of the processing tax became effective on new-crop rice after August 1, 1935.

EFFECTS OF THE RICE-PROCESSING TAX ON PROCESSORS

The milling of rough rice results in a number of rice products, including head rice, screenings, brewers' rice, polish, feed, and hulls. Polish, bran, and hulls are byproducts, and the first two of these are used extensively for feeding purposes. On the average, 1 barrel of rough rice of 162 pounds yields 97 pounds of head rice, 10 of screenings, 4 of brewers', 3 of polish, 13 of bran, and 35 pounds of hulls.

PRICE OF ROUGH RICE AND WHOLESALE VALUE OF MILLED RICE PRODUCTS, SOUTHERN STATES*, AND SPREAD BETWEEN PRICE AND VALUE, APRIL 1933-JULY 1936

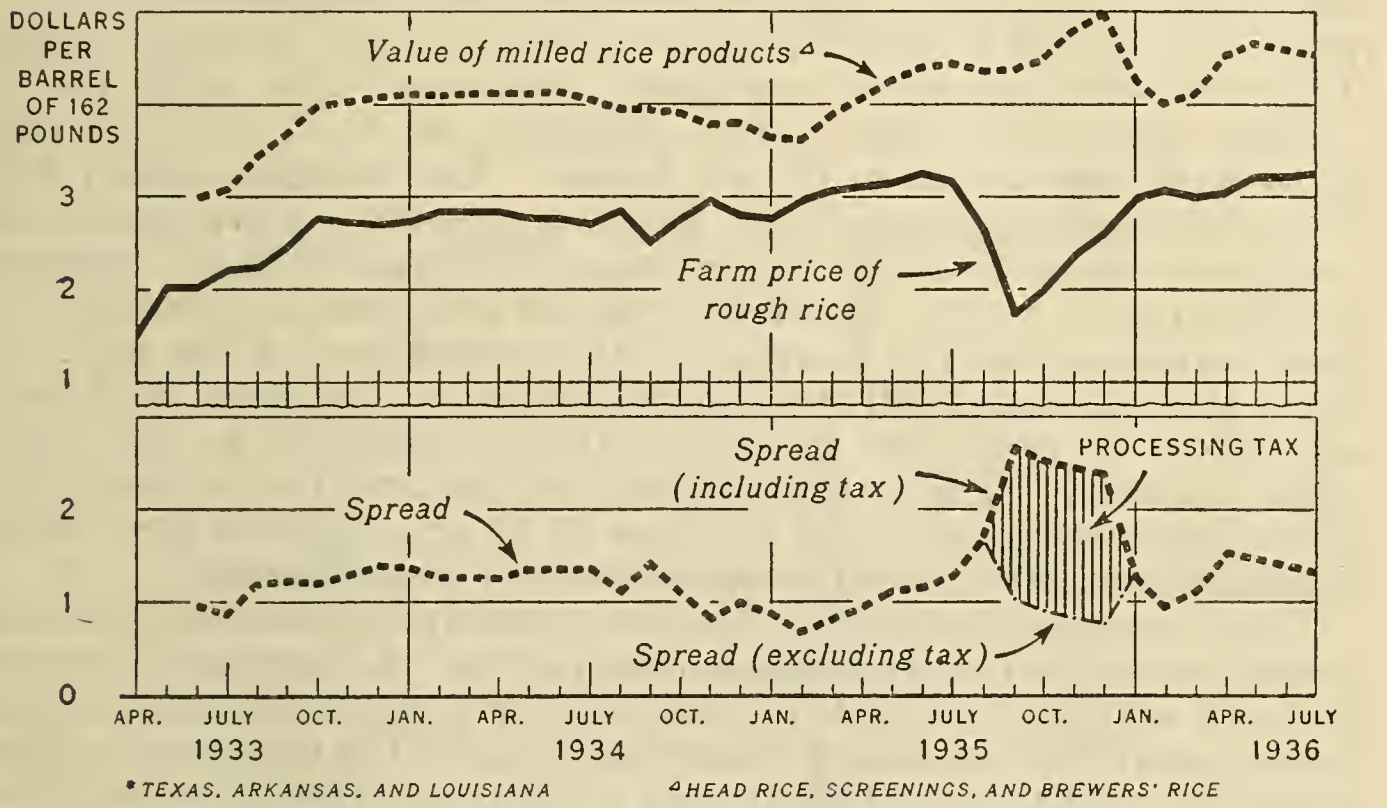


FIGURE 24.

There is considerable variation in milling yields, not only from year to year in the same class, but also from one class to another. In the South the classes range from Japan, a short-grain rice, to the several long-grain rices. California produces practically all one type—Japan rice. In computing the value of milled products, the output of the finished product in California was adjusted to reflect the large production of brewers' rice during this period.

To determine the effects of the rice-processing tax upon millers it is desirable to give separate consideration to the Southern and California areas. For the Southern district, the value of milled products (head rice, screenings, and brewers' rice) at New Orleans is compared with the farm price of rice in Louisiana, in table 34 and figure 24. Fancy Blue Rose was selected as a representative head rice, since the production of Blue Rose ranges from 50 to 70 percent of the total output. The prices of polish, bran, and hulls are not included, since their value on the average is only about 5 percent of the value of total rice products. The price series of rough rice includes all varieties grown in Louisiana.

In table 34 and figure 24, the value of the milled products per barrel of rough rice, the price of rough rice per barrel, and the spread between them are shown.

The average spread from August 1933 to July 1935 was $1.16 per barrel. The spread during the period, September to December 1935, in which the processing tax on rice was in effect was $2.51. The difference between these two average spreads was $1.35, compared with the tax of $1.62 per barrel. In the 6 months following the removal of the tax, February to July 1936, the average spread was $1.29.

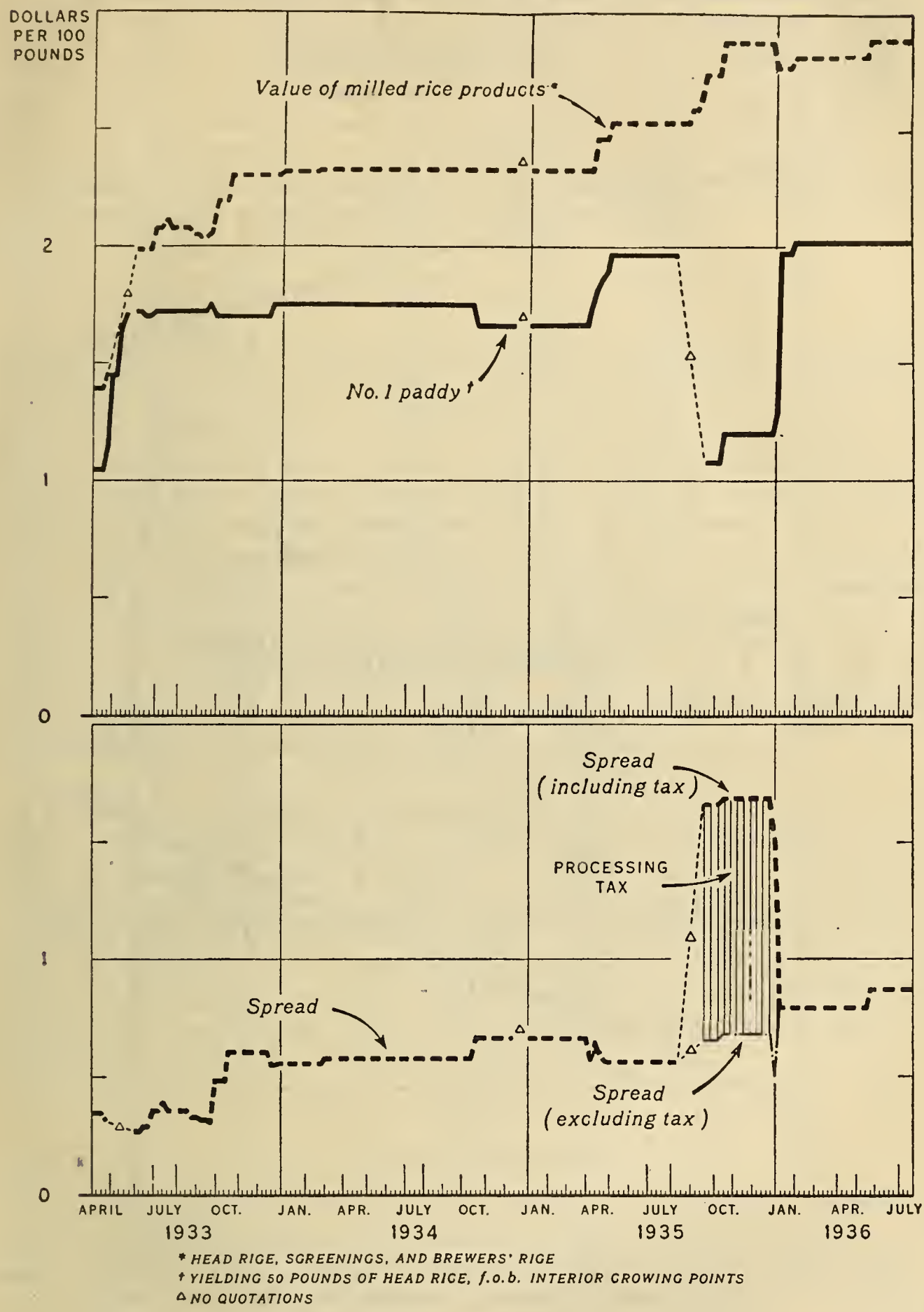
Processing margins also may be measured, using a system of weights. It may be assumed that the total cost of rough rice is equal to the farm price multiplied by mill receipts, and that the returns of clean rice sold by millers are represented by the market prices of the milled products multiplied by the shipments from mills. All of these prices, receipts, and shipments, are for the respective current months. Using this method, it is found that the average spread between the price of rough rice and the value of milled products from August through December 1935 was $2.47 per barrel, compared with $1.30 for the 2 years ending July 1935. The difference, or $1.17, may be compared with the tax of $1.62 per barrel. The average spread from June 1933 through March 1935, which is possibly a more representative pre-tax period, was $1.15, giving a difference of $1.32 compared with the tax of $1.62. If prices of polish and bran were included in these computations the increase in the spread during the period in which the tax was effective would be somewhat less because of lower feed prices in 1935 than in 1934, but this difference in the results would be small. The average spread for the first 7 months of 1936, following the removal of the tax, was $1.29 or about the same as the margin prior to the period in which the tax was effective.

Thus, it appears that during this short period all but a small portion of the tax was shifted by the Southern rice millers. Moreover, if data were available making it possible in computing margins to allow for the fact that not all of the rice milled during the period of the tax was purchased concurrently, but was bought at some earlier time when prices were lower, it is probable that the increase in the margin would have been larger than indicated. Using such a more refined system of computation, it is quite possible that none of the tax would have been shown to have been absorbed by the processors. In the case of rice, for which no futures market exists so that purchases cannot be hedged, there would be justification for using such a method of computing processors' margins, rather than the method based on concurrent prices, if data were available.

For California, the price of No. 1 Paddy, f. o. b. interior growing stations, was used as a measure of rough rice prices. The milled products used included head rice, screenings, and brewers' rice. The outturn per 100 pounds of rough rice assumed for this analysis was 50 pounds of head rice, 15 pounds of brewers', and 4½ pounds of screenings. These conversion factors were adjusted roughly to the changes in outturn of the products during the period. The price of rough rice was deducted from the value of milled products. (Table 35 and figure 25). From June 1933 through March 1935 the spread averaged 55 cents and in the tax period, September 23, 1935–January 6, 1936, about $1.66 per 100 pounds, with a difference of $1.11 compared with a tax of $1.00 per 100 pounds. Following the removal of the processing tax (6 months beginning January 13, 1936) the spread averaged 82

cents. The foregoing comparison indicates that the amount of the tax borne by California millers, if any, was very small.

PRICE OF ROUGH RICE AND WHOLESALE VALUE OF MILLED RICE PRODUCTS, CALIFORNIA, AND SPREAD BETWEEN PRICE AND VALUE, APRIL 1933 - JULY 1936



* HEAD RICE, SCREENINGS, AND BREWERS' RICE
† YIELDING 50 POUNDS OF HEAD RICE, f.o.b. INTERIOR GROWING POINTS
△ NO QUOTATIONS

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FIGURE 25.

EFFECTS OF THE RICE-PROCESSING TAX ON CONSUMERS

A comparison of retail and wholesale prices of rice does not suggest that any appreciable portion of the processing tax was passed on to the consumers. Such a comparison is made difficult by the varying

lag in retail prices compared with wholesale, and the fact that retail and wholesale prices normally do not experience proportionate fluctuations.

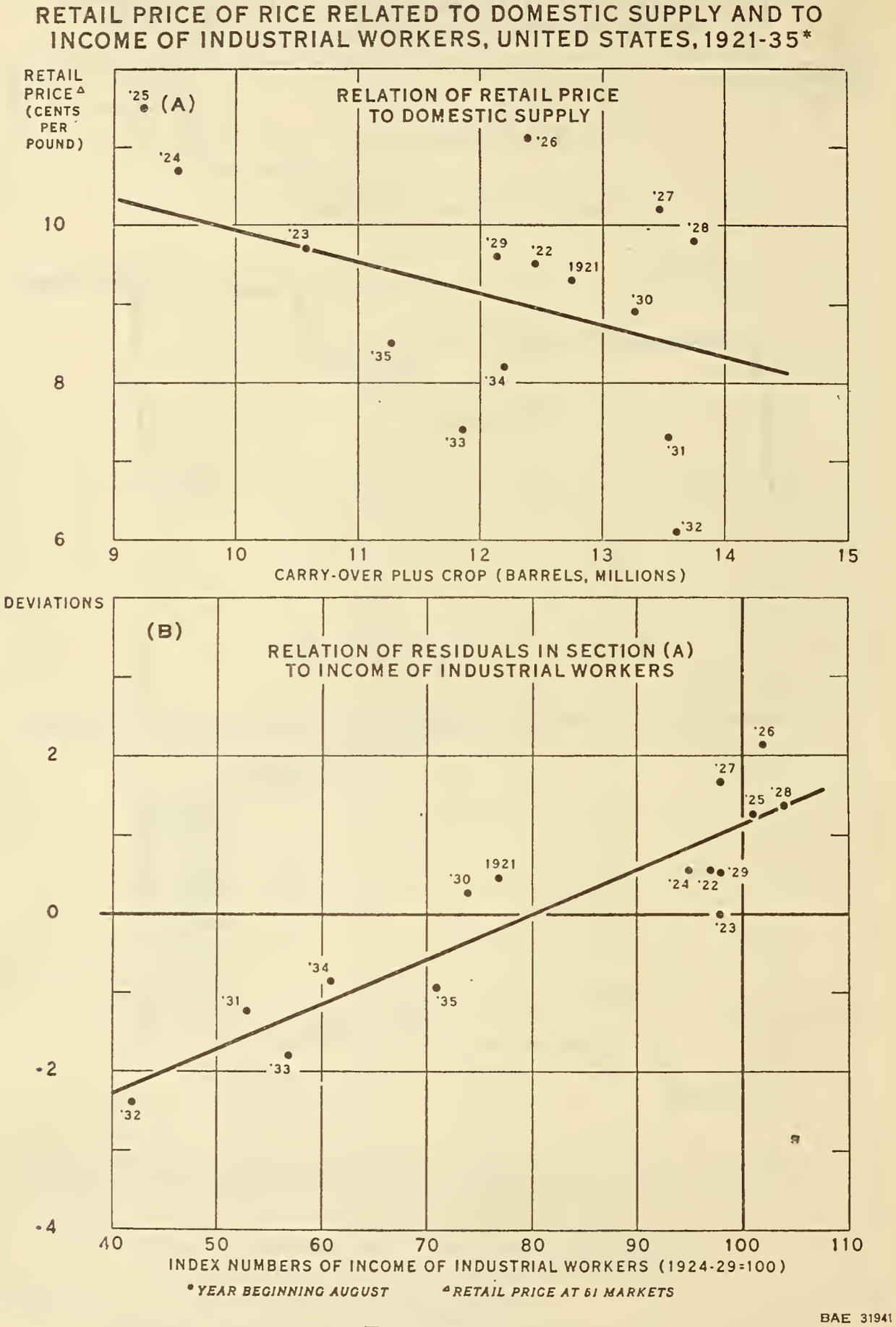

FIGURE 26.

If the miller passed the processing tax on to the wholesaler, and the latter in turn to the retailer, a sharp advance in wholesale prices at mills and distributing centers would have been expected following imposi-

tion of the tax, and a similar mark-up in retail markets at a somewhat later date. No such development in prices is evident (table 36). Wholesale prices in New Orleans and New York fluctuated together before and during the tax period. Wholesale prices were in an advancing phase in 1935, owing primarily to the improved export demand, speculative domestic inquiry, and reduction of Philippine imports. However, the retail price at New York increased only from 8.7 to 8.9 cents per pound in 1935. An analysis of the retail price of rice is given in figure 26 and table 37. The "dot" representing 1935 in figure 26 includes prices from August 1935 through February 1936. The 1935 observation is not materially out of line with other dots. If consumers bore the tax of 1.45 cents per pound of milled rice, the 1935 observation should probably have been a plus deviation in the lower part of the chart rather than a minus deviation.

EFFECTS OF THE RICE-PROCESSING TAX ON PRODUCERS

As only a small portion, if any, of the processing tax was absorbed by rice millers, and as there is no evidence that the tax was passed on to consumers, it follows that at least a large part of the tax in effect was a deduction from the price which would have been received by producers if the tax had not been in effect, assuming all other conditions unchanged. Over a longer period of time, the export drawback feature of the tax undoubtedly would have stimulated exports, leaving a smaller proportion of the total supply to be consumed domestically, and this would have resulted in higher prices paid by domestic consumers and larger returns (including benefit payments) to producers. In any event, of course, the deduction from the market price received by growers for rice, resulting from the tax during this short period of time, was returned in large part to producers through benefit payments.

SUMMARY AND CONCLUSIONS

The period in which the processing tax was in effect was very short, and it is doubtful whether the long-run effects would have been the same as during this short period. The rice millers apparently did not bear any large portion of the tax. A comparison of retail and wholesale prices does not suggest that the processing tax was passed on to consumers. It follows, that a large part of the tax represented in effect a deduction from the price which otherwise would have been received by producers. This amount, however, was returned to producers in the form of benefit payments.

PEANUTS

GENERAL SITUATION

Peanuts produced in the United States are usually classified as peanuts grown for nuts and peanuts grown for livestock feed. The total crop of nuts averaged 945,886,000 pounds per year during the period 1928–32. Of the quantity harvested for nuts about 140,000,000 pounds were used for seed, feed, or human consumption on the farm where grown and about 805,000,000 pounds were for sale to the trade. On the average, about 5 percent of the latter, or 40,000,000 pounds, was considered as dirt and trash, and about 73,000,000 pounds were crushed for peanut oil. Therefore, an average of about 690,000,000

pounds were used annually by the cleaners and shellers during the period 1928–32.

Prices received by growers for peanuts are influenced primarily by two factors. One of these is the total supply of peanuts for nuts, that is, the production of peanuts for nuts and the carry-over of old crop peanuts and the other is the level of income of consumers.

In the case of the 1934 crop very unusual conditions prevailed, in that a processing tax of 1 cent per pound was levied upon peanuts handled by the cleaners and shellers, and there was instituted a system of subsidy payments to growers for the diversion of peanuts to feed for livestock or to crushers for peanut oil. Owing to the fact that the supply of both cottonseed oil and lard was drastically reduced in 1934 and 1935, there was a strong demand for peanut oil. This situation proved very favorable for the diversion of peanuts to crushers, which, with the further stimulant of subsidy payments, caused peanut crushings to exceed all previous records. The volume of unshelled peanuts crushed in the 1934–35 season totaled 220,280,000 pounds and in the 1935–36 season 240,683,000 pounds, compared with 42,620,000 pounds in 1933–34 and the 1928–29 to 1932–33 average of 72,700,000 pounds. The diversion of this large quantity of peanuts to crushers left only about 800,000,000 pounds of peanuts (excluding the normal dirt and trash in farmers' goods) in 1934–35 and about 822,000,000 pounds in 1935–36 for the established cleaning and shelling trade against 765,000,000 pounds in 1933–34 and 690,000,000, the average for 1928–29 to 1932–33. This was a relatively small supply in view of the fact that the peanut crop for nuts totaled 1,230,040,000 pounds in 1934 and 1,302,895,000 pounds in 1935, or the second largest crops on record to that time. The net result of these unusual conditions was to raise the price of peanuts received by growers to a level about 1 cent per pound above that which otherwise would have been expected under the prevailing conditions of supply and demand.

EFFECTS OF THE PEANUT-PROCESSING TAX ON PROCESSORS

In October 1934 a processing tax of 1 cent per pound was levied upon peanuts entering the cleaning and shelling trade. Immediately following the effective date of the processing tax, the price of cleaned and shelled peanuts rose approximately the full amount of the tax. Whereas the margin between the price of cleaned Fancy f. o. b. and the price paid to growers for Virginia type peanuts averaged 1.55 and 1.21 cents during the 1932–33 and 1933–34 seasons, it averaged 2.71 cents during the 15 months (October 1934 to December 1935) the tax of 1.05 cents per pound (basis, cleaned peanuts) was in effect. Likewise, in the case of Virginia shelled No. 1's the margins averaged 1.13 from November 1932 to October 1933, 0.77 from November 1933 to September 1934, and 2.71 from October 1934 to December 1935 when the tax was 1.50 cents (basis, shelled peanuts). Tables 38 and 39 and figures 27, 28, 29, 30, and 31 give in detail the prices and margins for the three major types of peanuts. All bear out the conclusion that the processing tax or its equivalent was definitely passed on to the distributing and consuming trade or back to the producer.

A comparison of the average margin for 1933–34, when there was no tax, with that for the 15 months (October 1934 to December 1935) when the tax was in effect indicates the following: Runner type in the Southeastern States, 1.18 cents against 2.55; Spanish type in the

same States, 1.02 cents against 2.18; and Spanish type in the Southwestern States, 1.24 cents against 2.93 cents. Data for the 6 months following the invalidation of the tax indicate definitely that these

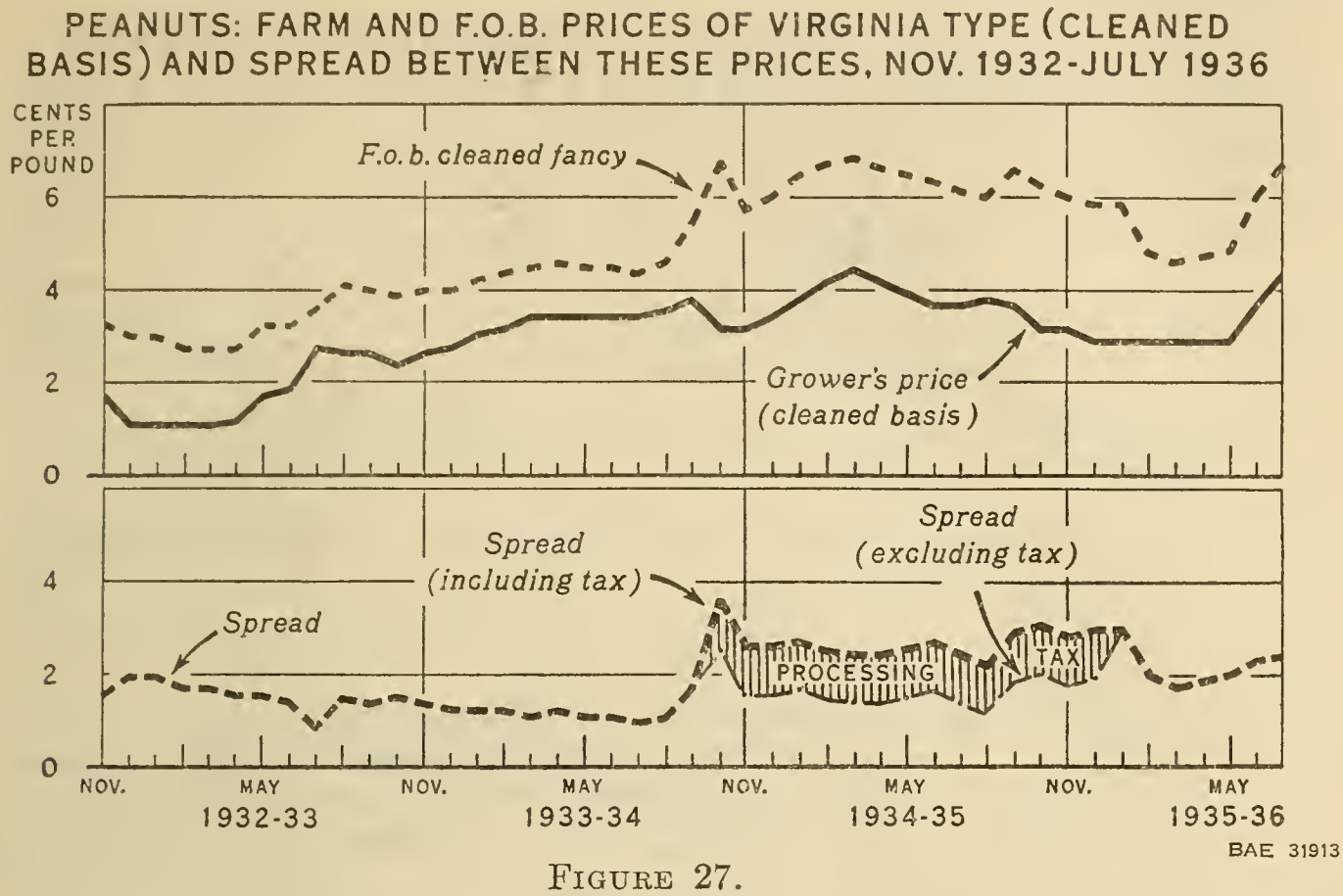

FIGURE 27.

margins decreased to about the normal level prevailing prior to the effective date of the tax. The margin between the price of Virginia type cleaned peanuts fancy grade f. o. b. and the price received by

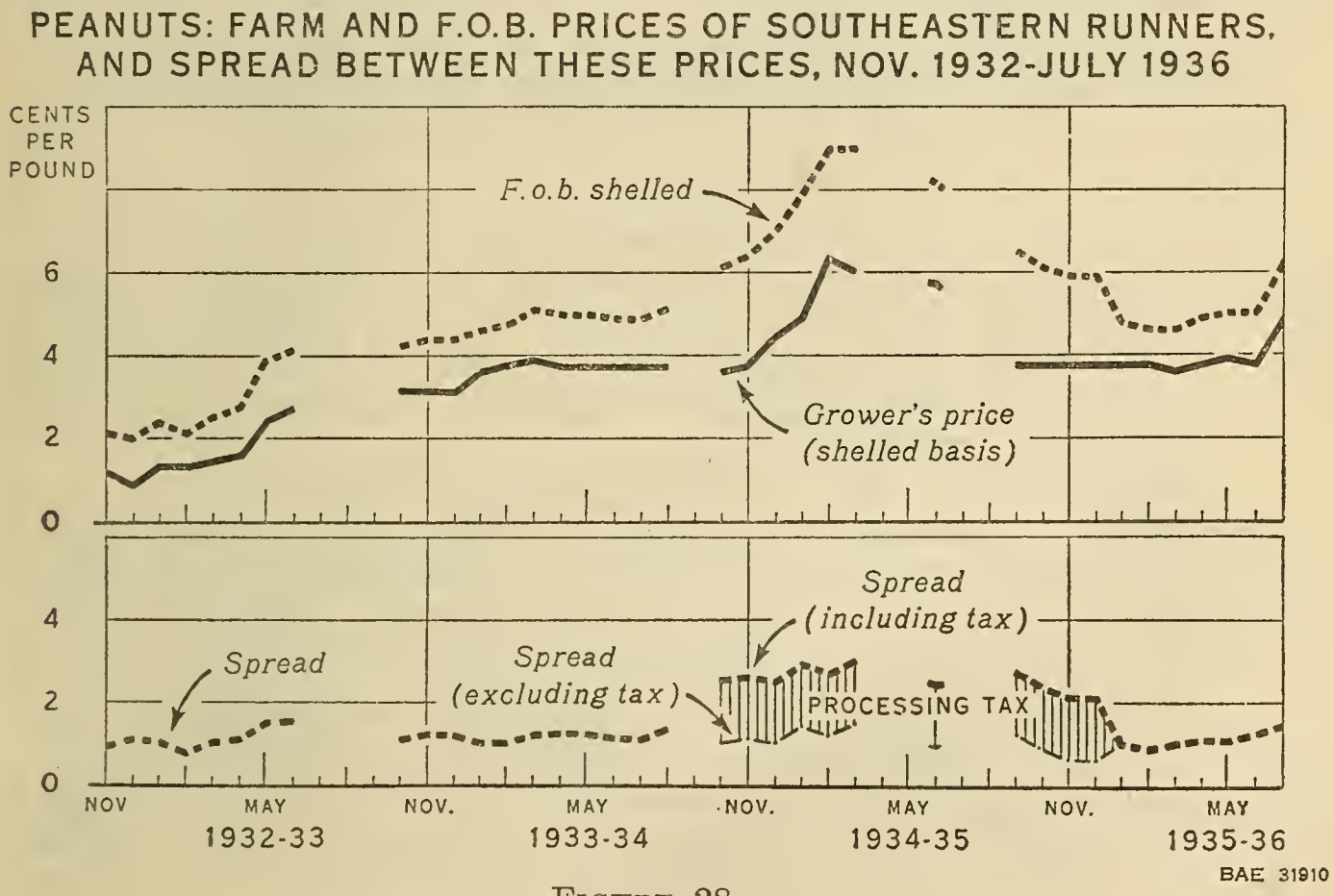

FIGURE 28.

growers declined from 2.99 cents in December 1935 to 1.99 cents in February 1936 and averaged 2.05 cents for the 6 months February to July; that between Virginia type shelled No. 1, f. o. b. and growers,

from 2.26 cents in December to 1.00 cent in February, Runner type Southeastern States from 2.13 to 0.87 cent, Spanish type Southeastern States from 1.90 to 0.95 cent, and Spanish Southwestern States from 2.93 to 1.37 cents.

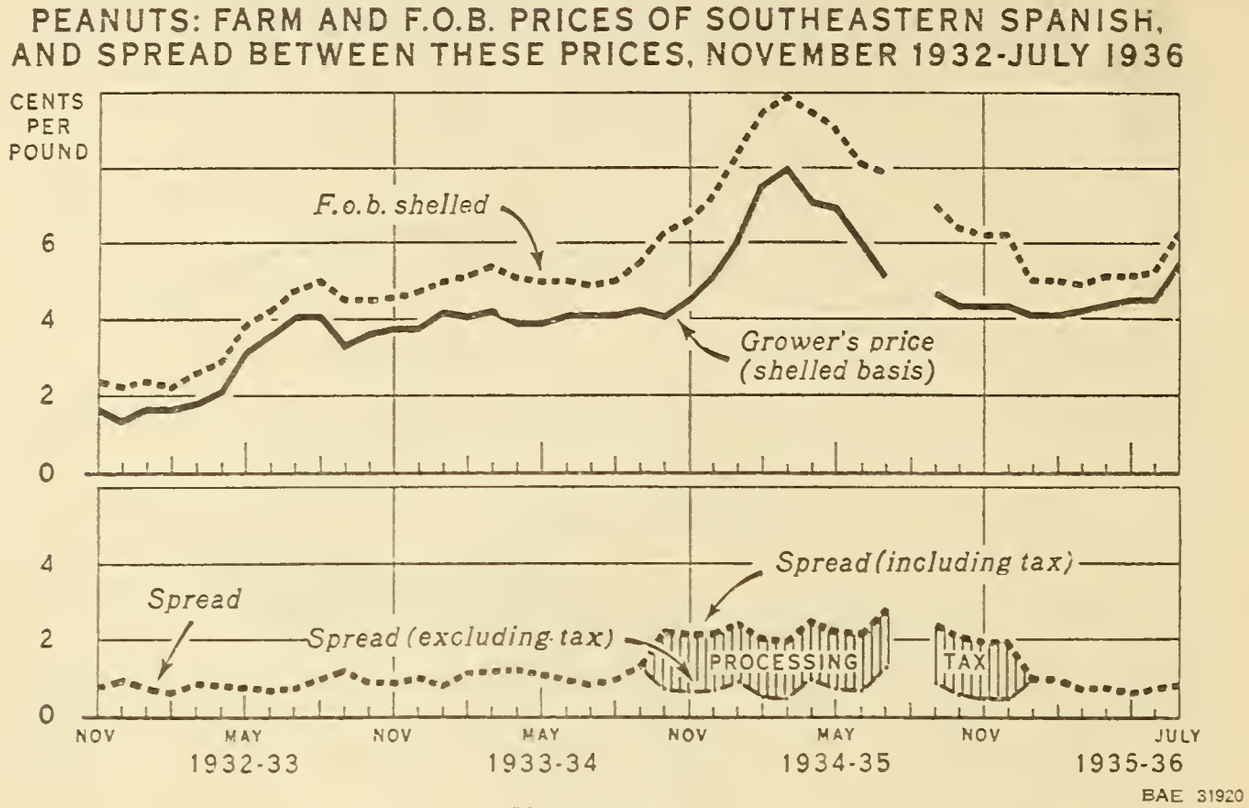

FIGURE 29.

EFFECTS OF THE PEANUT-PROCESSING TAX ON PRODUCERS

Owing to the unusual conditions relative to the demand for peanuts prevailing throughout the period the processing tax was in effect,

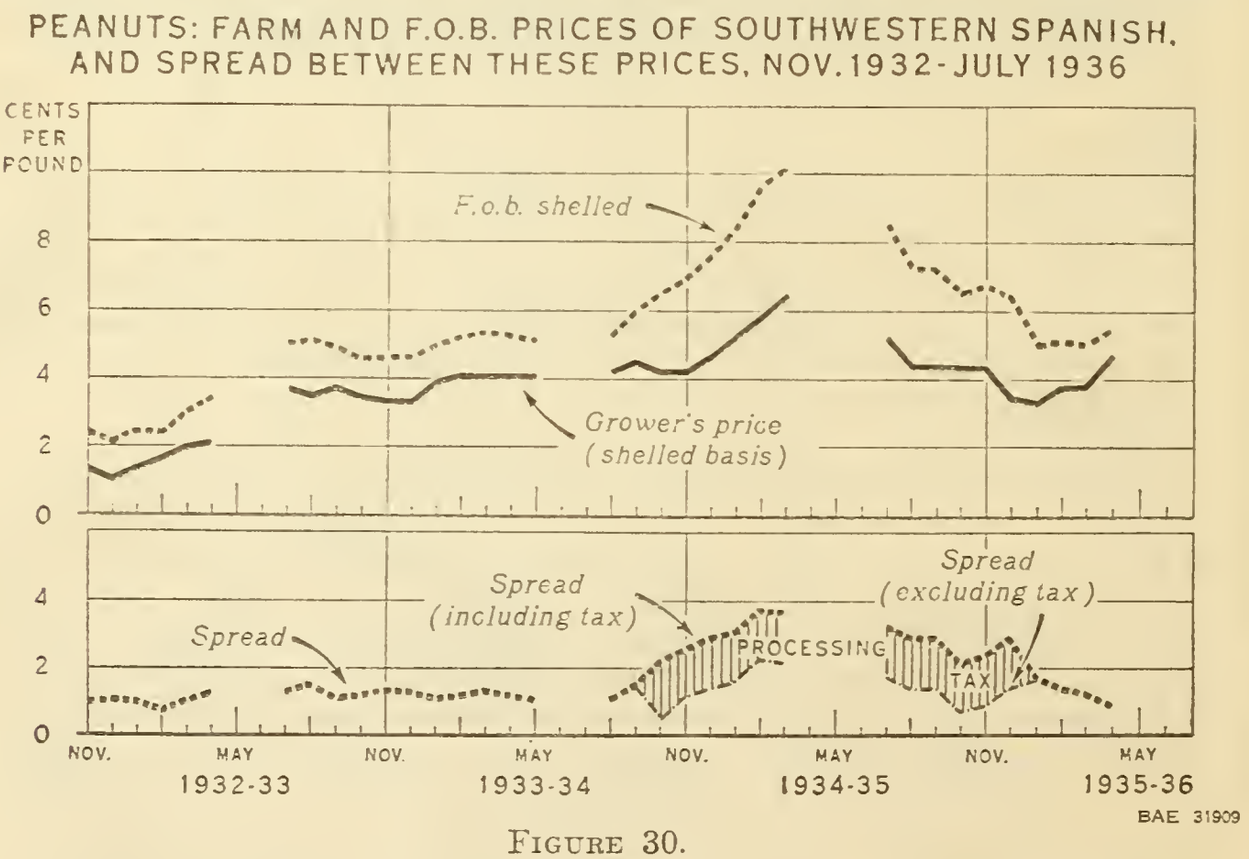

FIGURE 30.

peanut producers received approximately 1 cent per pound more for their 1934–35 crop than otherwise would have been expected on the basis of prevailing conditions of supply and consumer purchasing power.

The increased demand for peanut oil, occasioned by the reduced production of cottonseed oil and lard, coupled with the stimulus of diversion payments, created a greatly increased market outlet for a large volume of peanuts. This situation resulted in higher prices to growers for an increased supply of peanuts, despite imposition of the tax.

The net result of these higher prices to growers was to stimulate acreage expansion, and the largest peanut crop on record was produced in 1935. Since the unusual demand condition continued in effect, peanut producers were again able to market the increased supply at prices only slightly lower than those of 1934–35.

It is recognized that the mere fact that peanut prices were higher in 1934–35 and 1935–36 than would have been expected under ordinary

PEANUTS: FARM AND F.O.B. PRICES OF VIRGINIA TYPE (SHELLED BASIS) AND SPREAD BETWEEN THESE PRICES, NOV. 1932-JULY 1936

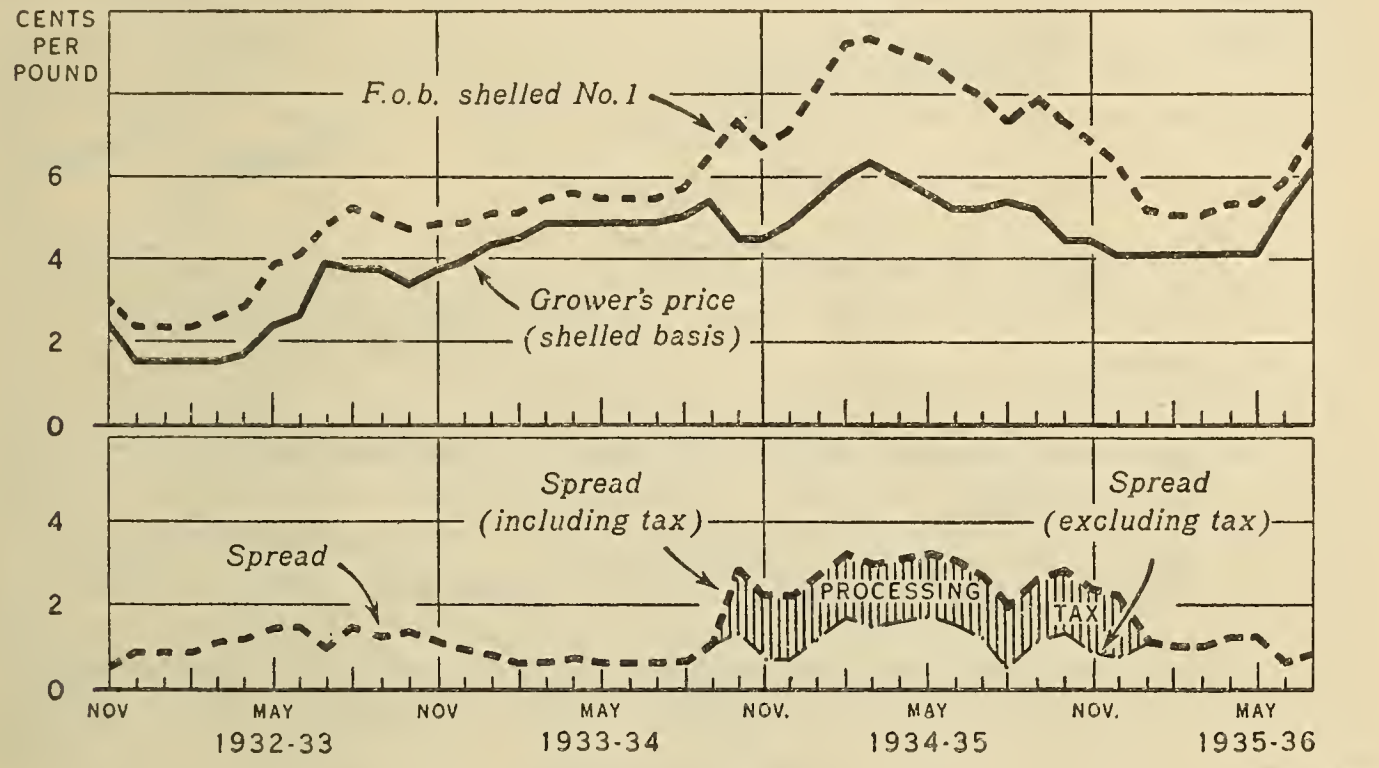

FIGURE 31.

demand conditions is not, by itself, conclusive proof that the processing tax was not shifted back to producers. Even though prices in the 2 years were high, because of the unusual demand condition, they might have been still higher had the tax not been in effect.

EFFECTS OF THE PEANUT-PROCESSING TAX ON DISTRIBUTORS

Very little information is available on wholesale and retail prices of peanuts, and consequently conclusive evidence of the effect of the processing tax on distributors of the product is lacking. The evidence at hand indicates that in general the wholesalers and retailers of peanuts and peanut products did not pay the processing tax.

The margin between the wholesale price of peanut butter at Chicago and the f. o. b. price of shelled peanuts (converted to the butter basis) averaged 2.61 cents per pound in the 1932–33 season, 2.84 in the 1933–34 season, and 3.00 in the 15 months (October 1934 to January 1936) the tax was in effect (table 40). Since this margin averaged slightly more during the period the tax was in effect than in the two seasons immediately preceding, it would appear that the manufacturers and distributors of peanut butter did not bear the

processing tax. An examination of the monthly values of these two price series (table 40 and figure 32) shows that the margin narrowed slightly in the first few months after the tax was imposed, but then widened again, and for the last 7 or 8 months of the processing-tax period was greater than at any time in the 2 years preceding the levying of the tax.

As indicated in table 40, the margin between retail and wholesale prices of peanut butter averaged 7.58 cents per pound during the 1933–34 crop year and 8.44 cents during the period the processing tax was in effect. If the retailers paid the tax, one would expect to find the margin, exclusive of the tax, somewhat narrower during the tax period

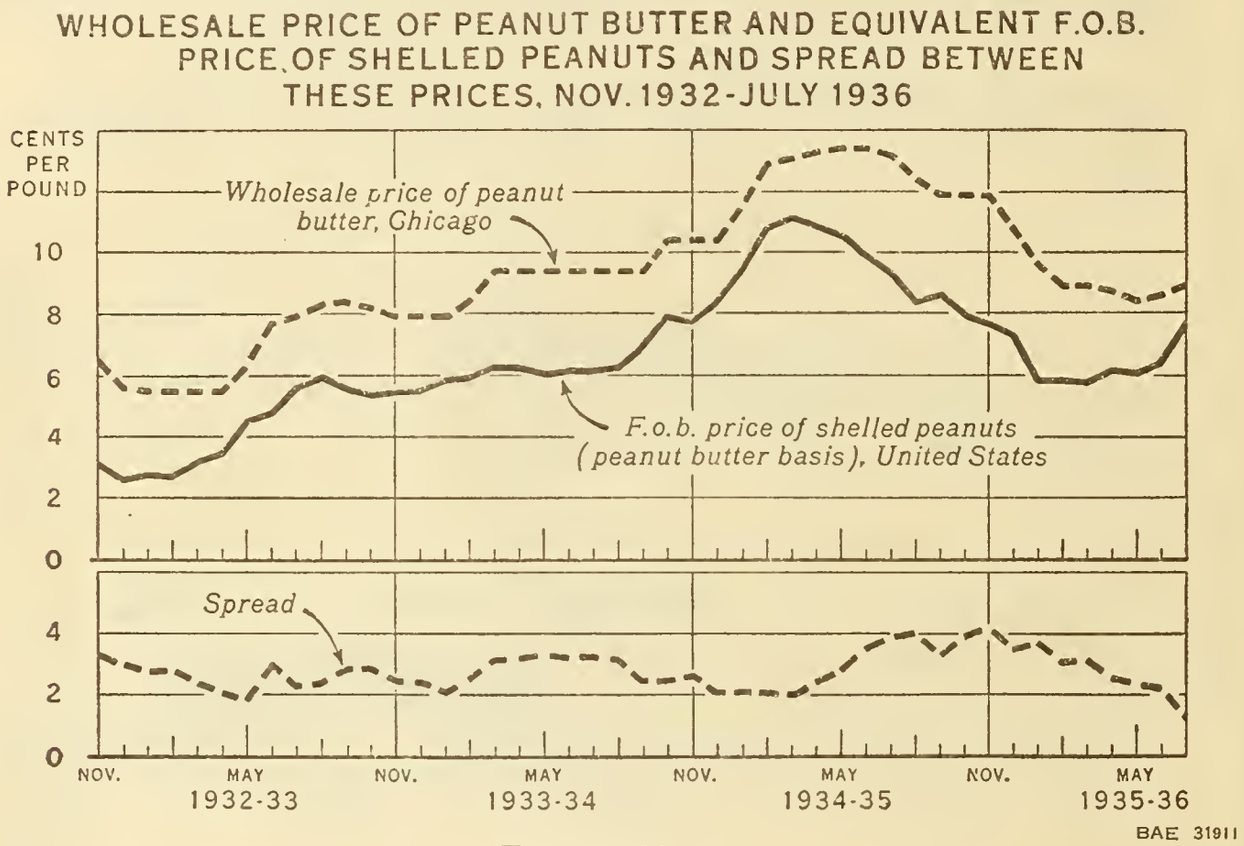

FIGURE 32.

than it was prior to the levying of the processing tax. The fact that this was not the case lends support to the contention that the retailers paid no part of the tax.

EFFECTS OF THE PEANUT-PROCESSING TAX ON CONSUMERS

In previous sections of this report it has been indicated that the peanut processors (cleaners and shellers) did not pay the processing tax, but passed it either backward to the producers or forward to the distributors; that there is no evidence that producers paid the tax; and that the distributors did not pay the tax. Following this process of partial elimination, there is some reason to conclude that the probable transmission of the tax was from processor through the distributor to the consumer. If the processors did not pay the tax themselves, or pass it back to the producers in the form of lower prices, they must have passed it on to the distributors. Since the available evidence indicates that the distributors did not pay the tax, it seems reasonable to conclude that it was passed on to consumers in the form of higher retail prices for peanuts and peanut products.

SUMMARY AND CONCLUSIONS

An analysis of the price spreads between the f. o. b. price of cleaned and shelled peanuts and the price paid to growers (cleaned and shelled basis), before and after the processing tax became effective, indicates that all of the tax was shifted either on to the distributing trade and consumers or back to producers. The margin increased by the full amount of the tax when the tax became effective and decreased to approximately its usual magnitude after the tax was invalidated. In the case of peanut butter, the only finished peanut product for which wholesale and retail prices are available, there is evidence that distributors did not pay the tax. Examination of the prices paid to growers indicates that peanut producers received approximately 1 cent per pound more for the 1934–35 and 1935–36 crops than might have been expected under the prevailing conditions of supply and consumer purchasing power. Therefore, since the cleaners and shellers were able to shift the tax, and since there is no evidence that it was shifted back to producers, there is some reason to conclude that the tax was shifted on to consumers in the form of higher retail prices of peanuts and peanut products.

SUGAR

The principal type of sugar consumed in the United States is made from sugarcane and sugar beets. Sugar beets are produced in the western and north central sections of the United States by growers who sell to mills which make refined sugar directly from the beets. The growers and processors operate under a participating type of contract, whereby the grower receives a certain percentage of the net proceeds from the sale of the beet sugar and, in some areas, of the beet pulp and molasses. These proceeds consist of the actual amounts received for these products at points of delivery, minus costs of transportation, brokerage, advertising, and all other expenses accruing after the sugar has been bagged which are properly chargeable to the marketing of the product. These deductions made before division of the proceeds also include all taxes, including processing taxes. After the proceeds are computed in this way, they are divided between the grower and the processor on what is in effect a percentage basis, with the percentage division varying from year to year as a result of negotiation between growers and processors.

The production of cane sugar involves three distinct functions: growing of sugarcane, the manufacture of raw sugar, and sugar refining. These functions are performed either by separate groups, or in combinations which differ by areas. The most complete combination of these functions is found in Hawaii, where almost the whole industry is integrated in one organization that controls all stages of production and marketing until the refined cane sugar is sold to wholesalers and retailers. The refinery which melts most of the Hawaiian raw sugar is located in California. The other cane areas supplying the United States market include Cuba, which is the only important foreign source of sugar sold in this country, Puerto Rico, the Philippine Islands, the Virgin Islands, and continental United States. From the standpoint of the incidence of the sugar-processing tax, the Philippine Islands, Puerto Rico, and Hawaii may be considered as a part of the United States, and will be spoken of as the insular possessions, although from some other standpoints they would have to receive separate con-

sideration. On the continent, Louisiana is the principal source of cane sugar, and in the following discussion the small Florida industry will be included with that of Louisiana. The manufacture of raw sugar from sugarcane usually is separate from the refining process, which is carried on for the most part along the eastern and southern seaboard. Contracts for the purchase of cane, as in the case of beets, are characteristically of the participating type. The price paid to growers for cane is in direct proportion to or essentially a fixed fraction of the price of raw sugar.

ECONOMIC LEGISLATION ASSOCIATED WITH THE SUGAR-PROCESSING TAX

The processing tax on sugar became effective on June 9, 1934, as one part of a four-phase program in aid of growers in the United States and Cuba. This program was initiated almost exactly 4 years after the Tariff Act of 1930, under which the duty on Cuban sugar had been increased from 1.765 to 2 cents per pound, raw value. Although this increased the price of sugar in the United States relative to world prices, both domestic and world prices continued to decline after June 1930, and reached an all-time low in 1932. In the next year, the several groups of sugar interests convened under the auspices of the Government to discuss a proposed stabilization agreement under the Agricultural Adjustment Act, which was essentially a quota scheme intended further to isolate the sugar market of the United States from the world market. The progress of these discussions was accompanied by a marked rise in sugar prices in this country relative to world prices. In September 1933 the final draft of the agreement was presented to the Secretary of Agriculture for his approval, but in the next month the Secretary rejected it, and the price of sugar in this country declined to its earlier level of parity with the world market.

Meanwhile, most of the commodities classified as "basic" under the Agricultural Adjustment Administration had been brought under programs of governmental assistance, and other products soon followed. Early in January 1934, bills to include sugar as a basic commodity under the act were introduced into Congress, and in February an official announcement indicated that a quota system similar in principle to the earlier proposal would be instituted. By the next month the establishment of the many-sided program for sugar appeared probable to the sugar trade. On May 9 the legislation was approved by the President, and one month later it went into effect. The four phases of the sugar program were:

(1) A processing tax was to be paid by the last processor of the finished product. Except for a small portion of the output of the raw sugar, which is sold directly to manufacturers of food products who do not require refined sugar, this last processor in the case of cane sugar was the refiner, whereas in the case of beet sugar it was the manufacturer of beet sugar. The processing tax amounted to 50 cents per hundred pounds on 96° raw sugar or 53.5 cents on refined sugar. Refined sugar is generally taken as the equivalent of one and seven hundredths times the same quantity of raw sugar of 96° purity.

(2) A system of benefit payments to growers in the United States and insular possessions was provided. Sugar-beet growers received payments designed to equal the difference between the market price for sugar beets and the parity price. The sugarcane producers of continental United States received a payment similar in character.

Cane growers of the insular possessions received payments for holding production within the limits of quotas which were established as part of the program.

(3) Measures of direct quantitative control of the sugar to be made available for sale in the United States were instituted, in the form of a quota system allotting a definite tonnage to each of eight principal producing regions. If any one of these regions failed to reach its quota, the deficit was assigned to other regions, in effect making the total quota a fixed quantity available for sale during the period in which it was effective. However, the quotas were subject to change both from year to year and during the year.

(4) Changes in the tariff on sugar from foreign countries (imported almost entirely from Cuba) were made. The duty on Cuban sugar was lowered from 2 to 1½ cents upon the inception of the program, which action may or may not be considered as an attempt to offset the processing tax of similar amount. This one-half cent reduction in the duty was followed, in September 1934, by a further reduction from 1.5 cents to 0.9 cent, or a reduction of 60 points,[14] as part of a new trade agreement with Cuba.

In January 1936 the Supreme Court rendered its decision invalidating the processing tax and production adjustment as practiced under the Agricultural Adjustment Administration, but the system of quota control was not affected.

EFFECTS OF THE SUGAR-PROCESSING TAX ON CONSUMERS

As in the case of the processing taxes on other commodities, the effects of the sugar-processing tax, as it operated under the given conditions of supply and demand actually encountered during the period of the tax, will be analyzed. This supply-and-demand setting included the quota system which has been described, and which continued in operation after the processing taxes were invalidated by the Supreme Court's decision.

Since the total quota for sugar was completely filled each year, the quota system definitely limited the quantity of sugar made available for sale in the United States, regardless of the processing tax. Consumers would pay only a given price and aggregate amount for such a quantity, depending upon the existing state of demand, which is largely influenced by consumer purchasing power. Therefore, the tax did not affect the retail price in any way, at least over any appreciable period of time, and so could not have been passed on to consumers.

In other words, although the price of sugar to consumers did rise as a result of a limitation of supply under the quota, the tax itself had little or nothing to do with this rise, which would have taken place under the quantity-control program even if there had been no tax. Because of the fixed quantity of sugar made available to consumers under the quota system, the considerations of elasticity of demand, which were important in analyzing the incidence of the taxes on other commodities, do not find application with respect to sugar. The definite conclusion is that the tax did not affect either the supply of or demand for sugar in the retail markets, and hence did not affect retail prices paid by consumers.

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[14] A point, as employed on the New York Coffee and Sugar Exchange, amounts to 0.01 cent per pound, or 20 cents per short ton.

EFFECTS OF THE SUGAR-PROCESSING TAX ON DISTRIBUTORS

The spread between the United States average retail price and the New York wholesale quotation of refined sugar, for the period 1932–36, is shown in table 41 and figure 33. The spread indicated by these data differs somewhat from the real spread, because wholesale quotations are nominal much of the time, and stocks and unfilled orders of wholesalers fluctuate considerably. It is believed, however, that a properly weighted spread would show the same tendencies as those indicated by these figures.

The spread during the period of the tax varied to some extent. During the first 9 months in which the tax was effective the spread remained substantially the same as it was during the preceding years. In March 1935 the spread declined, coincident with the rise in the wholesale price quotation. This lower margin continued through October, when the margin increased to approximately its usual level.

SUGAR, REFINED: RETAIL AND WHOLESALE PRICES, AND SPREAD BETWEEN THESE PRICES, JUNE 1932-JULY 1936

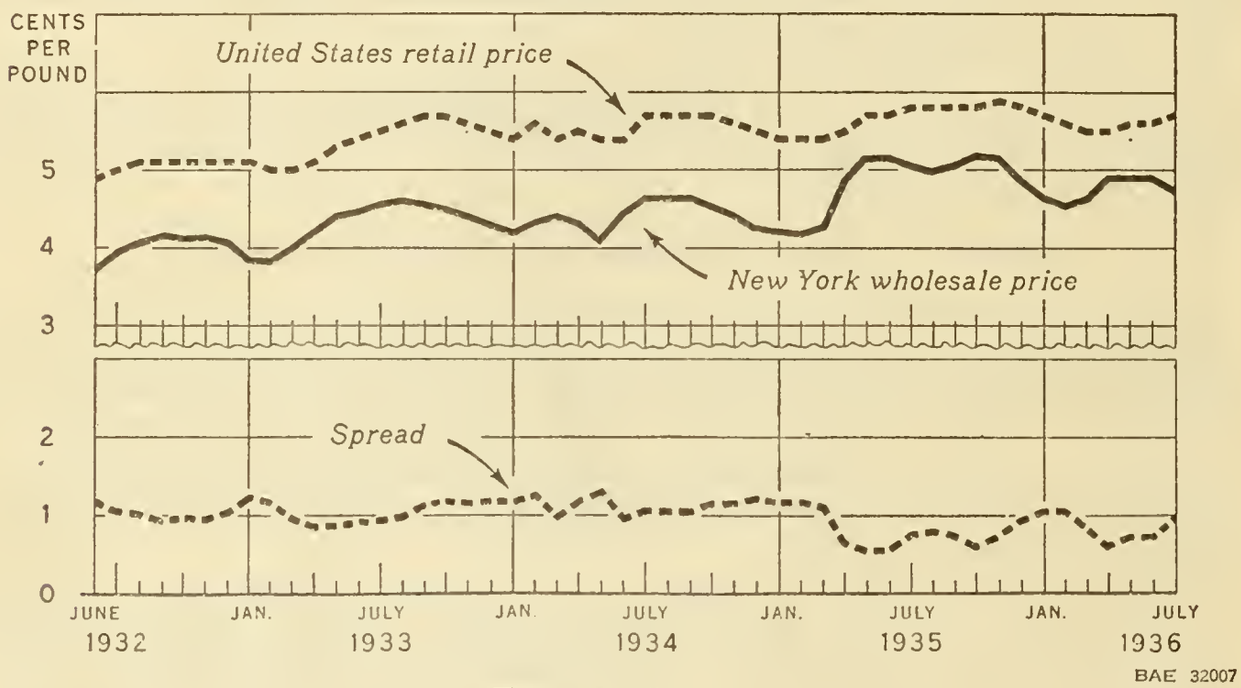


FIGURE 33.

During the first few months after the tax was removed the margin again declined, with rising wholesale prices, but recovered by July 1936 to approximately its usual level.

There is nothing in this sequence of events to indicate that the margin exclusive of the tax was lower during the period of the tax than it would have been if the tax had not been in effect. As indicated above, the margin continued at its usual level for some time after the tax went into effect. It declined later in the tax period, but this may be attributed to other factors which affected the wholesale price quotation. Among these factors were the production-adjustment programs for the continental United States and insular regions, which finally influenced supplies of sugar, and the general effectiveness of the quota system in increasing the price of raw sugar. Retail prices did not respond immediately and fully to these circumstances.

These data support the conclusion that would be reached from purely deductive reasoning, namely, that the retailers and distributors of refined sugar did not absorb any appreciable portion of the processing tax on sugar.

EFFECTS OF THE SUGAR-PROCESSING TAX ON REFINERS OF CANE SUGAR

Wholesale prices of refined sugar, prices of raw sugar converted to a refined basis, and concurrent spreads between these prices, are shown in table 41 and figure 34. As indicated in the note that appears below table 41, the quotations on raw sugar for November and December 1934 are open to serious question, but the indicated possible discrepancies do not seem to be such as would materially alter the conclusions to be drawn from the data.

It is difficult to reach exact conclusions regarding the incidence of the tax from a study of the price spreads shown in figure 34, because of the considerable fluctuation in the spread which is an ordinary occurrence. Prior to 1934, the margin varied about six points on the average, or

SUGAR: WHOLESALE PRICES OF REFINED, AND OF RAW (CONVERTED TO REFINED BASIS), NEW YORK, AND SPREAD BETWEEN THESE PRICES, JUNE 1932-JULY 1936

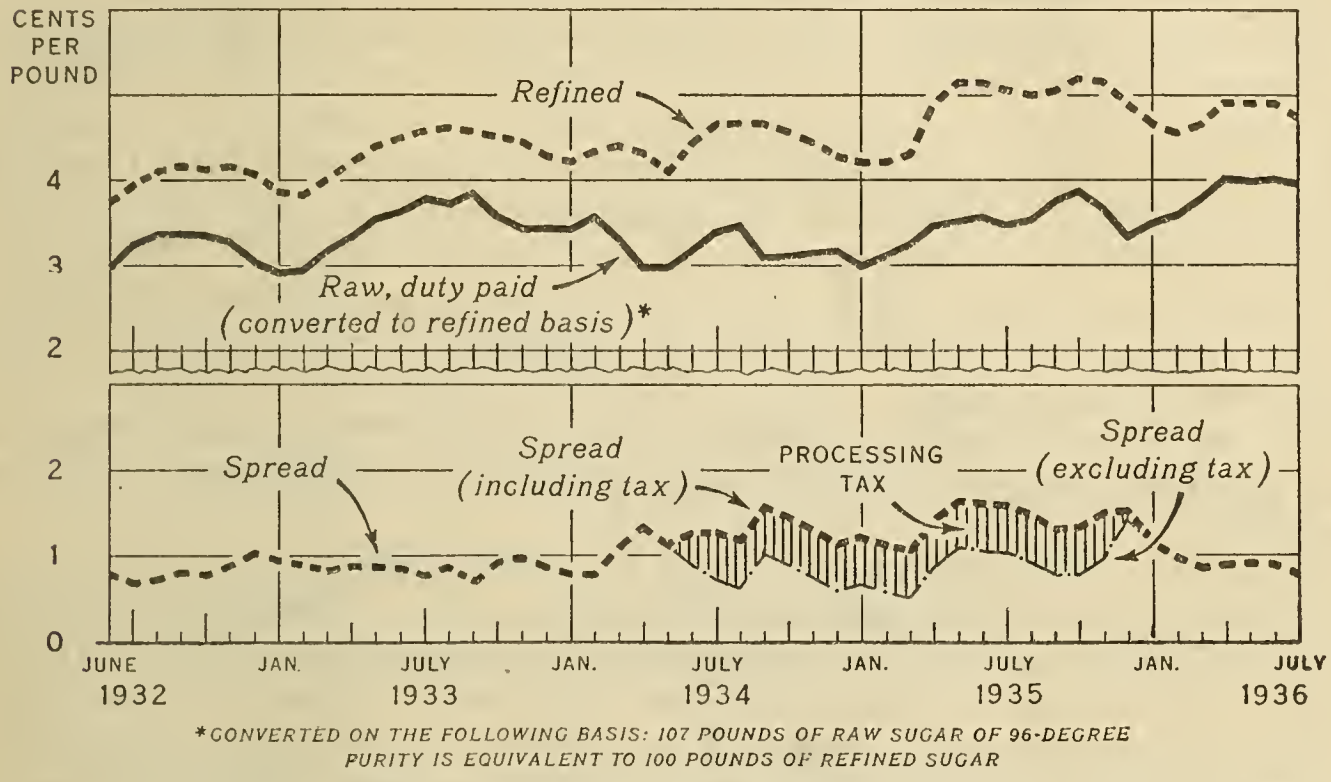


FIGURE 34.

about 8 percent of the amount of the margin. On the basis of available information, it appears that the fluctuation of the refiners' margin results from many factors, largely of an episodic nature.

Despite these fluctuations, however, the data shown in figure 34 do seem definitely to indicate that the refiner did not absorb any appreciable portion of the processing tax. The gross margin increased shortly before and at the time the tax went into effect, and declined shortly before and after removal of the tax, by amounts which left the average net margin (or price spread minus the tax) approximately what it was before and after the tax period. A comparison of the margin during the period of the tax with that during the 2 years preceding and 6 months following indicates that there was no difference which could not be assigned to statistical error. Detailed examination of the margin in the light of conditions existing prior to, during, and after the period in which the tax was effective, further supports the conclusion reached from a comparison of the averages that the tax was not absorbed by refiners of cane sugar. In the light of the evidence presented in figure 34, however, it seems unnecessary to add such detailed comments.

EFFECTS OF THE SUGAR-PROCESSING TAX ON MANUFACTURERS OF RAW SUGAR AND SUGARCANE GROWERS

It has been shown that consumers did not pay any more for sugar as a result of the imposition of the processing tax, and that distributors and refiners of cane sugar did not absorb the tax. It follows, therefore, that the burden of the tax on cane sugar was borne by the manufacturer of raw sugar or by the grower of sugarcane, or was divided between them. It is very difficult to determine the incidence of the tax as between these two groups, because of the diversity of sources of raw cane sugar and the difficulty of obtaining adequate price quotations for sugarcane and other data. Some light may be thrown on the subject by a study of prices of raw sugar and prices paid to Louisiana growers for sugarcane as shown in table 42.

During the 2 years, 1932–33, and part of the year 1936, the average margin of the manufacturer of raw sugar, per pound of raw sugar produced, was 1.11 cents. During the 2 years, 1934–35, the margin was 1.29 cents. Expressed as an amount per ton of cane sugar, the margins for the respective periods were $1.76 and $2.04. Although the fact that the margin was larger during the period of the tax indicates that certain cost factors were contributing to a larger margin, thus making it impossible to determine exactly what the margin would have been in the absence of the tax, the data do not indicate that the burden of the tax was borne by the raw-sugar manufacturers.

Since the tax was not borne by consumers or by refiners or distributors of cane sugar, and apparently was not borne by the manufacturers of raw sugar, it follows that the grower of cane sugar, as the residual element in the situation, did bear the burden of the tax as such.

However, the growers received benefit payments, as previously described, and the aggregate of these payments was somewhat greater than the total of the processing taxes collected on sugar. Hence, producers were no worse off because of the tax. Moreover, the quota system described above resulted in a higher price to producers aside from the direct effect which processing taxes and benefit payments had on their returns.

A similar conclusion is reached with respect to the incidence of the tax on sugar produced from cane grown in the insular possessions. Of course, where the functions of cane growing, raw-sugar manufacturing, and refining are combined, as in the Hawaiian industry, the combination would absorb the tax and receive the benefit payments.

The foregoing conclusions are supported also by a consideration of changes in the world price of raw sugar and the duty-paid price in the United States. When the tax was invalidated, the duty-paid price rose approximately by the amount of the tax, relative to world prices. This increase in the price received for Cuban sugar indicates that the tax had been borne by Cuban producers, and that the price received for raw sugar by domestic and insular producers (growers and raw-sugar manufacturers taken together) was lower than it otherwise would have been during the tax period, by the amount of the tax.

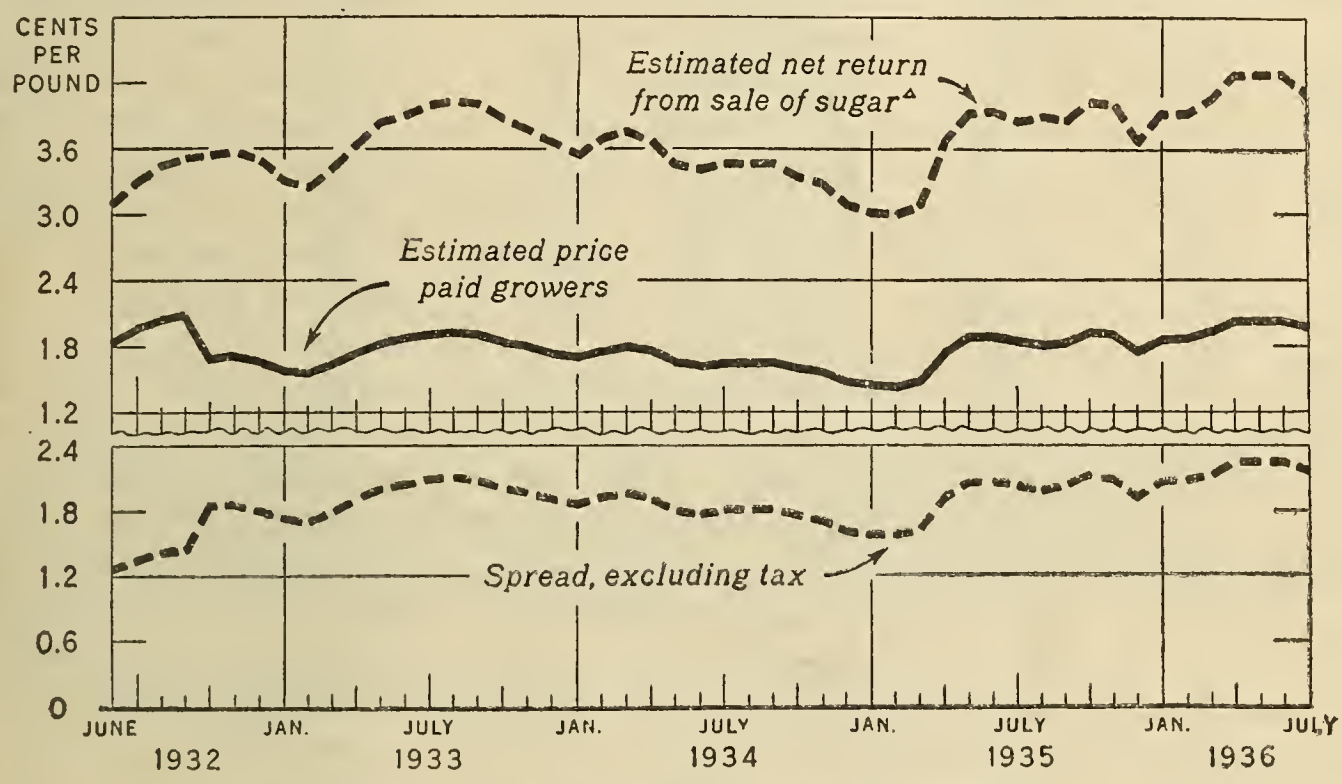
In the case of Cuban sugar, no separation of the incidence of the tax as between cane-grower and raw-sugar manufacturer is practicable. If the half-cent reduction in duty made at the time the processing tax went into effect is viewed as an offset to the tax, and would

not have become effective if the tax had not been imposed, the tax and the reduction in duty would balance, and Cuban producers could not be considered as having been injured by the net effects of the two measures. In that event, the cost may be considered as having been absorbed by the United States Government, through a reduction in revenues which otherwise would have been received from the import duties. Of course, if the reduction in duty is not viewed as an offset to the tax, these considerations would not apply.

EFFECTS OF THE SUGAR-PROCESSING TAX ON BEET-SUGAR MANUFACTURERS AND SUGAR-BEET GROWERS

As previously noted, beet sugar is made directly from sugar beets, without the intervening process of raw-sugar manufacture found in connection with cane sugar. Therefore, the beet-sugar manufacturer was the processor under the act, and paid the processing tax.

BEET SUGAR: ESTIMATED NET RETURN TO MANUFACTURERS, PRICE PAID GROWERS, AND SPREAD BETWEEN THEM, JUNE 1932-JULY 1936*



* DATA FURNISHED BY AGRICULTURAL ADJUSTMENT ADMINISTRATION
△ AFTER DEDUCTING TAXES AND SALES EXPENSES

FIGURE 35. BAE 32140

The margin of beet-sugar manufacturers during the 2 years prior to imposition of the processing tax, during the period of the tax, and following removal of the tax, is shown in table 43 and figure 35. The margin was computed by subtracting the estimated price paid to growers from the estimated net return from the sale of beet sugar.

It is difficult to relate the behavior of this margin to the processing tax. The margin had been declining for about a year prior to the date of the imposition of the tax, and continued to decline for approximately another year after that date. Beginning about the middle of the tax period, the margin rose rapidly, and thereafter experienced a more gradual rise which continued after the tax was removed. The average margin for the years 1932, 1933, the tax-free period of 1934, and the period February to July of 1936 was 1.90 cents per pound, as compared with an average margin during the period in which the tax was effective of 1.86 cents per pound (excluding the

tax). After allowing for the statistical error inherent in any such computation, there is nothing in these comparative averages to indicate that the beet-sugar processors as a group absorbed any appreciable portion of the tax. Examination of figure 35, showing chronological developments with respect to the margin, also does not yield any indication that the processors absorbed the tax.

This inference at first glance seems to be contrary to the conclusion which might be arrived at deductively. As previously noted, the net proceeds from the sale of beet sugar, after deducting all taxes including the processing tax, were divided between manufacturer and grower on the basis of a participating contract. If consumers paid no more for sugar as a result of the tax, and if distributors of the sugar did not absorb the tax, it would at first appear to follow that the tax was shared between beet-sugar manufacturer and sugar-beet grower in proportion to their respective shares of the net proceeds, from which the tax had been deducted.

For example, using hypothetical figures, if a ton of sugar beets yielded sugar selling for $12, and the participating contract allowed for a 50–50 division of proceeds, the grower and the manufacturer would receive $6 each. If, however, a tax of $1.50 were levied upon this sugar, the net proceeds to be divided would be $10.50 instead of $12, and the respective shares would be $5.25 each. Thus, each party to the participating contract apparently would be receiving 75 cents less than they would have received in the absence of the tax, and hence would be bearing equally the burden of the tax.

But this possible deductive conclusion is based on the apparently fallacious assumption that the proportionate shares of the proceeds from the sale of the sugar, as set forth in the participating contract, were not affected by the tax. The annual purchase agreements between growers and manufacturers, however, were subject to negotiation between associations of producers and the manufacturers, on the base of conditions existing at the time. Evidently the division of proceeds would have been different in the absence of the processing tax and benefit payments, which were designed to bring the growers' realized returns up to the parity price. Had it not been for these payments, the processors of sugar beets probably would have been compelled to give a larger part of the proceeds from the sale of beet sugar to the growers, in order to induce the growers to produce an adequate volume of beets. In the case of sugar, unlike the other commodities, the benefit payments made to growers of sugar beets were not on some "base-period" production, but upon current production, and hence constituted an inducement to produce.

These conclusions are supported by a detailed examination of conditions in the sugar industry, prices paid for sugar beets over a period of years in relation to prices of alternative products which the growers might produce, and by the fact that growers certainly would not have produced the same volume of beets at the return realized solely from the sale of the beets as they did produce upon the inducement of such return plus the benefit payment which brought prices up to parity. Detailed evidence relating to these points seems to be unnecessary, in view of the more direct evidence afforded by the examination of the beet-sugar manufacturers' margin.

It appears, therefore, that as in the case of sugarcane, the growers of sugar beets bore the immediate burden of the tax, but were reimbursed by the receipt of benefit payments which in the end resulted merely in a temporary diversion of funds realized from the sale of the finished sugar.

TABLE 1.—*Retail price and index numbers of hog products, consumption and index numbers of Federally inspected pork, including lard, and index numbers of retail value of consumption and of national income, 1921–36*

Year	Retail price per 100 pounds of hog products [1]		Consumption of Federally inspected pork, including lard		Index numbers (1921–32=100)	
	Price	Index numbers (1921–32=100)	Consumption (pounds)	Index numbers (1921–32=100)	Retail value of consumption [2]	National income [3]
1921	$26.42	103.2	5,212,000,000	77.9	80.9	81.7
1922	25.27	98.7	5,777,000,000	86.4	85.7	85.4
1923	24.47	95.6	7,057,000,000	105.5	101.4	97.2
1924	24.58	96.0	7,201,000,000	107.7	103.9	100.9
1925	28.70	112.1	6,297,000,000	94.2	106.1	107.7
1926	30.59	119.5	6,154,000,000	92.0	110.5	110.5
1927	28.40	110.9	6,706,000,000	100.3	111.8	112.0
1928	27.05	105.7	7,330,000,000	109.6	116.4	113.9
1929	27.43	107.1	7,299,000,000	109.1	117.6	117.5
1930	26.41	103.2	6,919,000,000	103.5	107.3	108.9
1931	22.11	86.4	7,055,000,000	105.5	91.6	92.2
1932	15.71	61.4	7,250,000,000	108.4	66.9	72.2
1933	14.49	56.6	7,272,000,000	108.7	61.9	67.1
1934	18.24	71.3	6,604,000,000	98.7	70.7	74.9
1935	27.28	106.6	4,657,000,000	69.6	74.6	80.0
1936	[4] 28.27	110.4	[5] 5,114,000,000	76.5	84.9	[5] 88.4

[1] Computed from retail value of hog products given in The Margin Between Farm Prices and Retail Prices of Ten Foods by Frederick V. Waugh, Bureau of Agricultural Economics (mimeographed).
[2] Computed from retail price and consumption of Federally inspected pork, including lard.
[3] Bureau of Foreign and Domestic Commerce, 1929–35. These figures extended back for previous years by adjusting national income estimates given in America's Capacity to Consume, by Leven, Moulton, and Warburton. Published by The Brookings Institution.
[4] Based on first 8 months of year.
[5] Estimate.

Source: Bureau of Agricultural Economics.

TABLE 2.—*Wholesale value of hog products and price per 100 pounds of hogs at Chicago, by months, November 1931 to July 1936*

Date	Hog product value [1]	Hog price per 100 pounds [2]	Spread [3]	Spread minus tax
1931—November	$5.61	$4.68	$0.93	
December	4.86	4.31	.55	
1932—January	4.83	4.19	.64	
February	4.61	4.16	.45	
March	5.13	4.58	.55	
April	4.89	4.15	.74	
May	4.31	3.59	.72	
June	4.65	3.96	.69	
July	5.69	5.07	.62	
August	5.36	4.82	.54	
September	5.24	4.46	.78	
October	4.53	3.74	.79	
November	4.15	3.45	.70	
December	3.62	3.18	.44	
1933—January	3.71	3.31	.40	
February	4.01	3.63	.38	
March	4.58	3.96	.62	
April	4.54	3.88	.66	
May	5.21	4.64	.57	
June	5.29	4.58	.71	
July	5.30	4.58	.72	
August	5.27	4.48	.79	
September	5.58	4.84	.74	
October	[4] 5.70	4.79	.91	
November	[5] 5.41	4.14	1.27	$0.84
December	[6] 5.03	3.36	1.67	.67
1934—January	5.27	3.57	1.70	.70
February	[7] 6.47	4.56	1.91	.41
March	[8] 7.11	4.48	2.63	.38
April	6.82	4.00	2.82	.57
May	6.50	3.62	2.88	.63
June	7.27	4.20	3.07	.82
July	7.72	4.64	3.08	.83
August	9.28	6.20	3.08	.83
September	9.90	6.99	2.91	.66
October	8.66	5.63	3.03	.78
November	8.52	5.53	2.99	.74
December	8.97	5.87	3.10	.85
1935—January	10.71	7.66	3.05	.80
February	11.26	8.39	2.87	.62
March	11.90	9.15	2.75	.50
April	11.86	9.04	2.82	.57
May	12.40	9.43	2.97	.72
June	12.59	9.57	3.02	.77
July	13.16	10.19	2.97	.72
August	14.65	11.54	3.11	.86
September	14.42	11.71	2.71	.46
October	13.53	10.37	3.16	.91
November	12.28	9.43	2.85	.60
December	12.11	9.69	2.42	.17
1936—January	[9] 11.11	9.97	1.14	.83
February	11.23	10.53	.70	
March	11.15	10.59	.56	
April	11.41	10.73	.68	
May	10.83	9.85	.98	
June	11.33	10.25	1.08	
July	11.63	10.77	.86	

[1] Value of all edible products, fresh basis (lard rendered) in 100 pounds of live hogs computed from wholesale prices on carlot basis, Chicago, reported by National Provisioner Daily Market Service.
[2] Based on daily quotations of Good to Choice hogs, 180–200 pound weights, Chicago.
[3] Difference between wholesale product value and hog price.
[4] Tax announced, Oct. 17, 1933.
[5] Tax of 50 cents per 100 pounds live weight became effective Nov. 5, 1933.
[6] Tax increased to $1, Dec. 1, 1933.
[7] Tax increased to $1.50, Feb. 1, 1934.
[8] Tax increased to $2.25, Mar. 1, 1934.
[9] Tax declared unconstitutional by Supreme Court, Jan. 6, 1936.

Source: Bureau of Agricultural Economics. November 1931 to April 1933, monthly data computed from weekly average price; May 1933 to July 1936, computed from daily prices.

TABLE 3.—*Price of hogs, wholesale value of hog products, Chicago, and spread between price and value, by months, 1932–36*

Year and month	Price per 100 pounds of good and choice 200–220-pound hogs	Value of 71.32 pounds of fresh and cured edible hog products [1]	Spread	Spread minus tax
1932—January	$4.15	$6.83	$2.68	----------
February	4.10	6.85	2.75	----------
March	4.54	7.08	2.54	----------
April	4.08	6.66	2.58	----------
May	3.56	5.98	2.42	----------
June	3.88	6.34	2.46	----------
July	5.08	7.28	2.20	----------
August	4.81	7.27	2.46	----------
September	4.45	7.06	2.61	----------
October	3.73	6.15	2.42	----------
November	3.44	5.74	2.30	----------
December	3.16	5.27	2.11	----------
Average	4.08	6.54	2.46	----------
1933—January	3.28	5.33	2.05	----------
February	3.60	5.49	1.89	----------
March	3.97	6.21	2.24	----------
April	3.88	6.25	2.37	----------
May	4.71	6.73	2.02	----------
June	4.59	6.88	2.29	----------
July	4.66	6.82	2.16	----------
August	4.51	6.87	2.36	----------
September	4.83	7.07	2.24	----------
October	4.86	7.32	2.46	----------
November	4.14	7.24	3.10	[2] $2.67
December	3.38	6.74	3.36	[3] 2.36
Average	4.20	6.58	2.38	2.26
1934—January	3.63	6.70	3.07	2.07
February	4.62	7.82	3.20	[3] 1.70
March	4.50	8.40	3.90	[3] 1.65
April	4.02	8.22	4.20	1.95
May	3.64	8.09	4.45	2.20
June	4.43	8.75	4.32	2.07
July	4.73	9.17	4.44	2.19
August	6.24	10.47	4.23	1.98
September	7.12	11.69	4.57	2.32
October	5.79	10.60	4.81	2.56
November	5.78	9.99	4.21	1.96
December	6.14	10.12	3.98	1.73
Average	5.05	9.17	4.12	2.03
1935—January	7.77	11.74	3.97	1.72
February	8.61	12.51	3.90	1.65
March	9.21	13.31	4.10	1.85
April	9.11	13.34	4.23	1.98
May	9.51	13.81	4.30	2.05
June	9.69	14.20	4.51	2.26
July	10.32	15.00	4.68	2.43
August	11.72	16.57	4.85	2.60
September	11.81	16.38	4.57	2.32
October	10.40	15.55	5.15	2.90
November	9.51	14.84	5.33	3.08
December	9.69	14.68	4.99	2.74
Average	9.78	14.33	4.55	2.30
1936—January	9.92	13.61	3.69	[4]
February	10.55	13.33	2.78	----------
March	10.59	13.08	2.49	----------
April	10.74	13.26	2.52	----------
May	9.84	12.83	2.99	----------
June	10.21	13.20	2.99	----------
July	10.82	13.61	2.79	----------
August	11.28	13.90	2.62	----------
September	10.69	13.88	3.19	----------
October	9.93	12.96	3.03	----------

[1] Value of all edible products, fresh and cured pork, and rendered lard. Prices of cured products were used in the compilation for products ordinarily sold in a cured state. For pork usually sold as a fresh product, prices of fresh products were used.

[2] Processing tax of $0.50 per 100 pounds became effective Nov. 5, 1933.

[3] Processing tax raised to $1 on Dec. 1, 1933, to $1.50 on Feb. 1, 1934, and to $2.25 on Mar. 1, 1934.

[4] Processing taxes invalidated by U. S. Supreme Court, Jan. 6, 1936.

Source: Bureau of Agricultural Economics.

TABLE 4.—*Retail and wholesale values of principal hog products at New York and spread between values, by months, January 1924 to July 1936*

Year and month	Retail product value [1]	Wholesale product value [2]	Spread between wholesale and retail values	Year and month	Retail product value [1]	Wholesale product value [2]	Spread between wholesale and retail values
1924				1929			
January	$12.49	$9.33	$3.16	January	$15.23	$10.78	$4.45
February	12.02	8.85	3.17	February	14.75	10.99	3.76
March	12.02	8.89	3.13	March	15.18	12.04	3.14
April	12.02	9.29	2.73	April	15.29	12.07	3.22
May	12.83	9.44	3.39	May	15.13	12.14	2.99
June	12.56	9.35	3.21	June	15.16	12.24	2.92
July	12.39	9.64	2.75	July	15.19	12.96	2.23
August	14.10	11.38	2.72	August	15.01	13.36	1.65
September	14.51	11.05	3.46	September	14.95	13.19	1.76
October	14.97	11.52	3.45	October	14.95	12.60	2.35
November	13.94	10.77	3.17	November	14.72	12.05	2.67
December	14.37	10.45	3.92	December	14.52	11.29	3.23
1925				1930			
January	14.34	11.55	2.79	January	14.36	11.45	2.91
February	14.27	11.49	2.78	February	14.36	11.94	2.42
March	15.37	13.55	1.82	March	14.36	12.14	2.22
April	16.32	14.02	2.30	April	14.26	11.78	2.48
May	16.32	13.26	3.06	May	14.22	11.79	2.43
June	16.59	13.47	3.12	June	14.06	11.64	2.42
July	16.94	14.60	2.34	July	14.09	11.82	2.27
August	18.20	14.94	3.26	August	14.23	12.15	2.08
September	18.52	15.20	3.32	September	14.05	12.68	1.37
October	18.27	14.74	3.53	October	14.25	12.36	1.89
November	17.63	14.60	3.03	November	13.78	11.73	2.05
December	17.44	14.01	3.43	December	13.62	11.33	2.29
1926				1931			
January	17.28	13.95	3.33	January	12.75	9.96	2.79
February	17.00	14.15	2.85	February	11.95	9.73	2.22
March	17.34	14.03	3.31	March	11.65	9.56	2.09
April	17.84	14.39	3.45	April	11.76	9.60	2.16
May	18.71	15.11	3.60	May	11.18	9.42	1.76
June	20.17	16.05	4.12	June	10.98	9.28	1.70
July	20.39	16.27	4.12	July	11.40	9.68	1.72
August	20.39	15.71	4.68	August	11.97	10.33	1.64
September	20.09	15.77	4.32	September	11.14	9.60	1.54
October	18.00	15.32	2.68	October	11.41	8.90	2.51
November	17.88	14.26	3.62	November	11.04	7.87	3.17
December	17.77	13.28	4.49	December	9.96	7.03	2.93
1927				1932			
January	17.12	13.28	3.84	January	9.77	6.60	3.17
February	16.51	13.03	3.48	February	9.61	6.41	3.20
March	16.52	12.93	3.59	March	9.33	6.47	2.86
April	16.50	12.87	3.63	April	9.23	6.11	3.12
May	16.74	12.62	4.12	May	9.07	5.68	3.39
June	15.22	12.34	2.88	June	8.52	5.83	2.69
July	15.15	12.42	2.73	July	8.89	6.67	2.22
August	15.61	12.78	2.83	August	8.95	6.50	2.45
September	15.78	13.05	2.73	September	8.90	6.35	2.55
October	16.38	13.30	3.08	October	8.50	5.92	2.58
November	16.32	12.52	3.80	November	8.17	5.47	2.70
December	15.34	11.58	3.76	December	7.46	5.06	2.40
1928				1933			
January	14.91	11.10	3.81	January	7.36	5.01	2.35
February	14.18	10.76	3.42	February	7.26	5.10	2.16
March	13.64	10.46	3.18	March	7.55	5.54	2.01
April	14.06	10.65	3.41	April	7.39	5.41	1.98
May	14.80	11.26	3.54	May	7.60	5.68	1.92
June	15.38	11.35	4.03	June	8.02	6.02	2.00
July	16.05	12.10	3.95	July	8.31	6.01	2.30
August	16.69	13.12	3.57	August	8.36	6.13	2.23
September	17.01	13.60	3.41	September	8.65	6.27	2.38
October	16.51	13.00	3.51	October	8.58	6.16	2.42
November	16.42	12.16	4.26	November	8.46	6.38	2.08
December	15.98	11.14	4.84	December	8.32	5.96	2.36

[1] Hog products as sold by retailer (amounting to 52.64 pounds) after allowing for shrinkage are the same as those used in the computation of wholesale composite price and value.

[2] Hog products (amounting to 53.78 pounds) consist of smoked hams, bacon, picnics, fresh loins, and lard combined in proportion to their respective yields per 100 pounds live weight.

TABLE 4.—*Retail and wholesale values of principal hog products at New York and spread between values, by months, January 1924 to July 1936*—Continued

Year and month	Retail product value [1]	Wholesale product value [2]	Spread between wholesale and retail values	Year and month	Retail product value [1]	Wholesale product value [2]	Spread between wholesale and retail values
1934				1935			
January	$8.21	$5.97	$2.24	May	$14.09	$11.43	$2.66
February	8.62	6.70	1.92	June	14.47	11.81	2.66
March	9.03	7.10	1.93	July	14.82	12.20	2.62
April	8.95	7.14	1.81	August	16.27	13.86	2.41
May	9.00	7.05	1.95	September	16.77	13.87	2.90
June	9.39	7.61	1.78	October	16.52	13.23	3.29
July	9.90	7.96	1.94	November	15.88	12.75	3.13
August	10.60	8.94	1.66	December	15.76	12.52	3.24
September	12.12	9.84	2.28				
October	11.55	9.05	2.50	1936			
November	10.93	8.55	2.38	January	15.44	11.79	3.65
December	11.05	8.87	2.18	February	14.74	11.21	3.53
				March	14.28	11.16	3.12
1935				April	14.27	11.29	2.98
January	12.13	9.97	2.16	May	13.97	11.06	2.91
February	12.75	10.49	2.26	June	14.33	11.29	3.04
March	13.38	11.01	2.37	July	14.37	11.48	2.89
April	13.72	11.09	2.63				

Source: Bureau of Agricultural Economics.

TABLE 5.—*Cash farm income from hogs, live weight of inspected hog slaughter and index of export demand for hog products, 1924–35*

Year	Cash farm income from hogs, including benefit payments	Live weight of inspected hog slaughter (pounds)	Index of export demand for hog products [1]
1924	$1,088,000,000	11,755,000,000	131.8
1925	1,340,000,000	9,713,000,000	137.9
1926	1,413,000,000	9,555,000,000	124.4
1927	1,210,000,000	10,180,000,000	89.9
1928	1,210,000,000	11,414,000,000	89.7
1929	1,286,000,000	11,226,000,000	100.6
1930	1,129,000,000	10,235,000,000	84.1
1931	767,000,000	10,419,000,000	58.6
1932	440,000,000	10,397,000,000	40.6
1933	509,000,000	10,909,000,000	44.7
1934	716,000,000	9,709,000,000	36.8
1935	730,000,000	5,905,000,000	24.8

[1] Computed on the basis of the relation between changes in the value per pound of exports of hog products and changes in the quantity of such exports.

Source: Bureau of Agricultural Economics.

TABLE 6.—*Flour, feed, and wheat: Prices at Minneapolis, by weeks, July 7, 1931, to July 29, 1936*

Date	Mill products							Wheat, No. 1 Dark Northern Spring, 13 percent protein per bushel	Spread (total value of products per bushel minus value of wheat)	Spread per bushel minus tax of 30 cents
	Prices in units usually quoted			Prices in terms of amounts produced from 1 bushel of spring wheat						
	Flour, standard spring patent, per barrel	Bran, spring, per ton	Middlings, standard, per ton	Flour, per 42 pounds	Bran, per 9.6 pounds	Middlings, per 8.4 pounds	Total value of products, per 60 pounds			
1931	*Dollars*	*Dollars*	*Dollars*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*
July 7	4.22	10.50	11.50	90.3	5.0	4.8	100.1	68.5	31.6	
July 14	4.10	9.75	10.75	87.8	4.7	4.5	97.0	64.5	32.5	
July 21	4.12	10.00	10.75	88.2	4.8	4.5	97.5	64.2	33.3	
July 28	4.05	9.88	10.25	86.9	4.7	4.3	95.9	60.4	35.5	
Aug. 4	4.05	9.75	9.00	86.9	4.7	3.8	95.4	60.1	35.3	
Aug. 11	4.32	10.00	9.75	92.4	4.8	4.1	101.3	69.2	32.1	
Aug. 18	4.22	11.00	10.75	90.3	5.3	4.5	100.1	63.5	36.6	
Aug. 25	4.17	10.50	10.50	89.5	5.0	4.4	98.9	63.6	35.3	
Sept. 1	4.15	10.25	10.25	89.0	4.9	4.3	98.2	66.0	32.2	
Sept. 8	4.22	10.25	10.75	90.3	4.9	4.5	99.7	67.8	31.9	
Sept. 15	4.40	9.75	10.25	94.1	4.7	4.3	103.1	73.9	29.2	
Sept. 22	4.25	9.75	10.00	91.1	4.7	4.2	100.0	67.4	32.6	
Sept. 29	4.18	9.25	9.75	89.5	4.4	4.1	98.0	64.9	33.1	
Oct. 6	4.10	9.25	9.25	87.8	4.4	3.9	96.1	65.1	31.0	
Oct. 13	4.22	9.12	9.12	90.3	4.4	3.8	98.5	68.5	30.0	
Oct. 20	4.28	9.12	9.12	91.6	4.4	3.8	99.8	68.6	31.2	
Oct. 27	4.52	10.25	10.25	97.0	4.9	4.3	106.2	74.9	31.3	
Nov. 3	4.85	12.75	13.00	103.7	6.1	5.5	115.3	79.0	36.3	
Nov. 10	5.12	14.50	15.25	109.6	7.0	6.4	123.0	78.9	44.1	
Nov. 17	4.75	14.75	15.25	101.6	7.1	6.4	115.1	78.7	36.4	
Nov. 24	4.62	14.00	14.50	99.1	6.7	6.1	111.9	76.1	35.8	
Dec. 1	4.55	12.25	12.25	97.4	5.9	5.1	108.4	74.9	33.5	
Dec. 8	4.62	12.75	12.75	99.1	6.1	5.4	110.6	71.7	38.9	
Dec. 15	4.38	12.75	12.75	93.7	6.1	5.4	105.2	72.0	33.2	
Dec. 22	4.52	12.75	12.75	97.0	6.1	5.4	108.5	70.9	37.6	
Dec. 29	4.45	12.75	12.75	95.3	6.1	5.4	106.8	71.1	35.7	
1932										
Jan. 5	4.52	12.25	12.25	96.9	5.9	5.1	107.9	70.2	37.7	
Jan. 12	4.58	13.25	12.25	98.1	6.4	5.1	109.6	72.1	37.5	
Jan. 19	4.68	13.00	12.25	100.3	6.2	5.1	111.6	74.5	37.1	
Jan. 26	4.58	12.00	11.50	98.1	5.8	4.8	108.7	73.6	35.1	
Feb. 2	4.62	11.25	10.75	99.0	5.4	4.5	108.9	74.2	34.7	
Feb. 9	4.58	10.25	10.00	98.1	4.9	4.2	107.2	71.9	35.3	
Feb. 16	4.62	11.00	10.75	99.0	5.3	4.5	108.8	75.1	33.7	
Feb. 23	4.62	11.50	10.75	99.0	5.0	4.5	108.5	75.2	33.3	
Mar. 1	4.52	12.25	11.75	96.9	5.9	4.9	107.7	72.4	35.3	
Mar. 8	4.68	13.25	12.75	100.3	6.4	5.4	112.1	72.9	39.2	
Mar. 15	4.40	13.25	12.50	94.3	6.4	5.2	105.9	68.9	37.0	
Mar. 22	4.22	13.25	12.25	90.4	6.4	5.1	101.9	64.1	37.8	
Mar. 29	4.12	13.75	13.00	88.3	6.6	5.5	100.4	62.1	38.3	
Apr. 5	4.42	13.25	12.75	94.7	6.4	5.4	106.5	67.4	39.1	
Apr. 12	4.62	14.25	13.75	99.0	6.8	5.8	111.6	73.0	38.6	
Apr. 19	4.50	13.75	13.75	96.4	6.6	5.8	108.8	70.9	37.9	
Apr. 26	4.45	12.25	12.50	95.4	5.9	5.2	106.5	69.0	37.5	
May 3	4.32	12.50	12.50	92.6	6.0	5.2	103.8	64.1	39.7	
May 10	4.32	11.25	11.25	92.6	5.4	4.7	102.7	64.9	37.8	
May 17	4.45	10.75	10.75	95.4	5.2	4.5	105.1	66.9	38.2	
May 24	4.60	9.00	9.00	98.6	4.3	3.8	106.7	69.1	37.6	
May 31	4.45	9.00	8.75	95.4	4.3	3.7	103.4	65.8	37.6	
June 7	4.30	9.00	8.50	92.1	4.3	3.6	100.0	59.9	40.1	
June 14	4.18	8.25	8.25	89.6	4.0	3.5	97.1	57.0	40.1	
June 21	4.08	10.25	10.00	87.4	4.9	4.2	96.5	56.0	40.5	
June 28	4.08	10.00	10.75	87.4	4.8	4.5	96.7	56.4	40.3	
July 6	4.08	7.50	7.88	87.4	3.6	3.3	94.3	57.8	36.5	
July 12	4.08	8.25	8.50	87.4	4.0	3.6	95.0	55.9	39.1	
July 19	3.92	8.50	9.00	84.0	4.1	3.8	91.9	51.0	40.9	
July 26	4.00	8.75	9.75	85.7	4.2	4.1	94.0	53.1	40.9	
Aug. 2	4.18	8.50	9.25	89.6	4.1	3.9	97.6	53.1	44.5	
Aug. 9	4.30	8.75	9.25	92.1	4.2	3.9	100.2	59.2	41.0	
Aug. 16	4.10	8.62	9.62	87.8	4.1	4.0	95.9	57.1	38.8	
Aug. 23	4.00	8.25	8.75	85.7	4.0	3.7	93.4	56.6	36.8	
Aug. 30	4.20	8.75	9.00	90.0	4.2	3.8	98.0	60.2	37.8	
Sept. 6	4.28	8.25	8.75	91.7	4.0	3.7	99.4	60.6	38.8	
Sept. 13	4.10	8.25	8.25	87.8	4.0	3.5	95.3	56.9	38.4	
Sept. 20	4.05	8.00	8.25	86.8	3.8	3.5	94.1	56.9	37.2	

TABLE 6.—*Flour, feed, and wheat: Prices at Minneapolis, by weeks, July 7, 1931, to July 29, 1936*—Continued

Date	Mill products							Wheat, No. 1 Dark Northern Spring, 13 percent protein per bushel	Spread (total value of products per bushel minus value of wheat)	Spread per bushel minus tax of 30 cents
	Prices in units usually quoted			Prices in terms of amounts produced from 1 bushel of spring wheat						
	Flour, standard spring patent, per barrel	Bran, spring, per ton	Middlings, standard, per ton	Flour, per 42 pounds	Bran, per 9.6 pounds	Middlings, per 8.4 pounds	Total value of products, per 60 pounds			
1932	*Dollars*	*Dollars*	*Dollars*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*
Sept. 27	4.12	8.25	8.25	88.3	4.0	3.5	95.8	57.9	37.9	
Oct. 4	4.08	8.00	8.25	87.4	3.8	3.5	94.7	56.9	37.8	
Oct. 11	3.88	7.75	7.75	83.1	3.7	3.3	90.1	53.0	37.1	
Oct. 18	3.88	7.75	7.75	83.1	3.7	3.3	90.1	53.4	36.7	
Oct. 25	3.85	7.62	7.62	82.5	3.7	3.2	89.4	50.5	38.9	
Nov. 1	3.72	7.62	7.62	79.7	3.7	3.2	86.6	48.8	37.8	
Nov. 8	3.65	7.62	7.62	78.2	3.7	3.2	85.1	50.4	34.7	
Nov. 15	3.90	8.38	8.25	83.6	4.0	3.5	91.1	51.0	40.1	
Nov. 22	3.72	8.00	8.00	79.7	3.8	3.4	86.9	50.0	36.9	
Nov. 29	3.60	7.75	8.00	77.1	3.7	3.4	84.2	46.5	37.7	
Dec. 6	3.85	[1] 7.75	7.75	82.5	3.7	3.3	89.5	48.8	40.7	
Dec. 13	3.80	8.12	7.75	81.4	3.9	3.3	88.6	48.6	40.0	
Dec. 20	3.75	8.00	7.25	80.4	3.8	3.0	87.2	47.5	39.7	
Dec. 27	3.55	7.25	7.00	76.1	3.5	2.9	82.5	44.6	37.9	
1933										
Jan. 4	3.60	7.50	7.25	77.1	3.6	3.0	83.7	45.4	38.3	
Jan. 10	3.88	8.00	7.50	83.1	3.8	3.2	90.1	53.0	37.1	
Jan. 17	3.82	8.25	7.75	81.9	4.0	3.3	89.2	50.0	39.2	
Jan. 24	3.85	8.25	8.00	82.5	4.0	3.4	89.9	49.4	40.5	
Jan. 31	3.82	8.25	8.00	81.9	4.0	3.4	89.3	48.4	40.9	
Feb. 7	3.75	8.50	8.00	80.4	4.1	3.4	87.9	48.6	39.3	
Feb. 14	3.70	9.00	8.50	79.3	4.3	3.6	87.2	48.4	38.8	
Feb. 21	3.70	9.50	8.75	79.3	4.6	3.7	87.6	49.6	38.0	
Feb. 28	3.70	10.00	8.75	79.3	4.8	3.7	87.8	48.6	39.2	
Mar. 7	4.10	11.50	11.00	87.9	5.5	4.6	98.0	53.5	44.5	
Mar. 14	4.10	11.25	11.25	87.9	5.4	4.7	98.0	54.0	44.0	
Mar. 21	4.05	11.25	10.50	86.8	5.4	4.4	96.6	52.5	44.1	
Mar. 28	3.88	10.50	9.75	83.1	5.0	4.1	92.2	55.5	36.7	
Apr. 4	4.20	10.25	9.25	90.0	4.9	3.9	98.8	57.6	41.2	
Apr. 11	4.40	10.75	10.50	94.3	5.2	4.4	103.9	62.2	41.7	
Apr. 18	4.67	11.00	10.75	100.1	5.3	4.5	109.9	66.2	43.7	
Apr. 25	4.88	13.25	13.25	104.6	6.4	5.6	116.6	70.9	45.7	
May 2	4.88	13.00	13.00	104.6	6.2	5.5	116.3	74.5	41.8	
May 9	4.80	13.00	13.25	102.9	6.2	5.6	114.7	72.0	42.7	
May 16	4.82	12.25	12.75	103.3	5.9	5.4	114.6	74.9	39.7	
May 23	4.82	10.75	10.75	103.3	5.2	4.5	113.0	72.5	40.5	
May 30	4.98	10.12	10.38	106.7	4.9	4.4	116.0	76.0	40.0	
June 6	4.88	10.25	10.50	104.6	4.9	4.4	113.9	74.4	39.5	
June 13	5.15	10.63	11.12	110.4	5.1	4.7	120.2	77.8	42.4	
June 20	5.18	11.25	12.25	111.0	5.4	5.1	121.5	76.9	44.6	
June 27	6.32	13.75	15.25	135.4	6.6	6.4	148.4	99.6	48.8	
July 5	6.22	15.75	16.75	133.3	7.6	7.0	147.9	102.4	45.5	
July 11	8.18	16.75	18.25	175.3	8.0	7.7	191.0	111.5	79.5	49.5
July 18	8.65	19.50	21.75	185.4	9.4	9.1	203.9	120.6	83.3	53.3
July 25	7.15	18.00	19.50	153.2	8.6	8.2	170.0	95.4	74.6	44.6
Aug. 1	7.30	18.25	20.25	156.4	8.8	8.5	173.7	99.6	74.1	44.1
Aug. 8	7.38	17.25	19.25	158.1	8.3	8.1	174.5	98.5	76.0	46.0
Aug. 15	7.15	16.75	18.75	153.2	8.0	7.9	169.1	94.6	74.5	44.5
Aug. 22	6.92	16.25	18.25	148.3	7.8	7.7	163.8	89.0	74.8	44.8
Aug. 29	6.95	15.75	18.25	148.9	7.6	7.7	164.2	85.9	78.3	48.3
Sept. 5	6.80	14.00	16.00	145.7	6.7	6.7	159.1	87.5	71.6	41.6
Sept. 12	6.88	13.50	14.50	147.4	6.5	6.1	160.0	87.2	72.8	42.8
Sept. 19	7.25	14.00	15.25	155.4	6.7	6.4	168.5	96.8	71.7	41.7
Sept. 26	6.80	14.50	15.50	145.7	7.0	6.5	159.2	89.8	69.4	39.4
Oct. 3	7.00	13.25	14.25	150.0	6.4	6.0	162.4	88.4	74.0	44.0
Oct. 10	6.70	13.00	14.25	143.6	6.2	6.0	155.8	84.5	71.3	41.3
Oct. 17	6.35	12.25	13.75	136.1	5.9	5.8	147.8	74.1	73.7	43.7
Oct. 24	6.80	13.50	14.50	145.7	6.5	6.1	158.3	86.2	72.1	42.1
Oct. 31	6.90	14.25	15.25	147.9	6.8	6.4	161.1	86.8	74.3	44.3
Nov. 7	6.85	13.75	14.75	146.8	6.6	6.2	159.6	85.0	74.6	44.6
Nov. 14	7.10	13.75	15.00	152.1	6.6	6.3	165.0	92.0	73.0	43.0
Nov. 21	6.95	13.75	15.00	148.9	6.6	6.3	161.8	89.1	72.7	42.7
Nov. 28	6.70	13.00	14.00	143.6	6.2	5.9	155.7	84.0	71.7	41.7

[1] Hard winter bran.

TABLE 6.—*Flour, feed, and wheat: Prices at Minneapolis, by weeks, July 7, 1931, to July 29, 1936*—Continued

Date	Mill products							Wheat, No. 1 Dark Northern Spring, 13 percent protein per bushel	Spread (total value of products per bushel minus value of wheat)	Spread per bushel minus tax of 30 cents
	Prices in units usually quoted			Prices in terms of amounts produced from 1 bushel of spring wheat						
	Flour, standard spring patent, per barrel	Bran, spring, per ton	Middlings, standard, per ton	Flour, per 42 pounds	Bran, per 9.6 pounds	Middlings, per 8.4 pounds	Total value of products, per 60 pounds			
1933	*Dollars*	*Dollars*	*Dollars*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*
Dec. 5	6.68	12.50	13.00	143.1	6.0	5.5	154.6	85.9	68.7	38.7
Dec. 12	6.68	12.75	12.75	143.1	6.1	5.4	154.6	83.6	71.0	41.0
Dec. 19	6.62	12.75	12.25	141.9	6.1	5.1	153.1	83.8	69.3	39.3
Dec. 26	6.62	12.75	12.50	141.9	6.1	5.2	153.2	83.6	69.6	39.6
1934										
Jan. 2	6.65	13.25	13.25	142.5	6.4	5.6	154.5	85.6	68.9	38.9
Jan. 9	6.80	14.25	14.25	145.7	6.8	6.0	158.5	85.9	72.6	42.6
Jan. 16	7.00	15.25	15.25	150.0	7.3	6.4	163.7	90.9	72.8	42.8
Jan. 23	6.80	15.00	15.25	145.7	7.2	6.4	159.3	91.0	68.3	38.3
Jan. 30	6.92	15.25	15.25	148.3	7.3	6.4	162.0	92.8	69.2	39.2
Feb. 6	7.00	15.75	15.75	150.0	7.6	6.6	164.2	93.0	71.2	41.2
Feb. 13	6.85	16.00	15.75	146.8	7.7	6.6	161.1	90.1	71.0	41.0
Feb. 20	6.72	16.50	15.75	144.0	7.9	6.6	158.5	87.8	70.7	40.7
Feb. 27	6.75	16.25	15.75	144.6	7.8	6.6	159.0	86.9	72.1	42.1
Mar. 6	6.73	16.75	15.75	144.2	8.0	6.6	158.8	88.0	70.8	40.8
Mar. 13	6.70	18.25	17.25	143.6	8.8	7.2	159.6	89.8	69.8	39.8
Mar. 20	6.62	19.50	18.25	141.9	9.4	7.7	159.0	88.6	70.4	40.4
Mar. 27	6.52	20.75	19.25	139.7	10.0	8.1	157.8	86.6	71.2	41.2
Apr. 3	6.48	20.75	20.00	138.9	10.0	8.4	157.3	86.9	70.4	40.4
Apr. 10	6.42	19.75	18.75	137.6	9.5	7.9	155.0	88.0	67.0	37.0
Apr. 17	6.28	16.50	16.25	134.6	7.9	6.8	149.3	80.4	68.9	38.9
Apr. 24	6.20	15.75	14.75	132.9	7.6	6.2	146.7	78.8	67.9	37.9
May 1	6.42	15.50	15.00	137.6	7.4	6.3	151.3	82.6	68.7	38.7
May 8	6.62	16.75	15.75	141.9	8.0	6.6	156.5	89.5	67.0	37.0
May 15	6.78	17.75	16.50	145.3	8.5	6.9	160.7	91.8	68.9	38.9
May 22	6.98	17.75	17.50	149.6	8.5	7.4	165.5	94.5	71.0	41.0
May 29	7.40	17.75	17.75	158.6	8.5	7.5	174.6	105.5	69.1	39.1
June 5	7.20	19.50	20.00	154.3	9.4	8.4	172.1	108.8	63.3	33.3
June 12	7.22	21.25	21.50	154.7	10.2	9.0	173.9	105.5	68.4	38.4
June 19	7.08	22.50	23.50	151.7	10.8	9.9	172.4	101.8	70.6	40.6
June 26	6.70	20.25	21.00	143.6	9.7	8.8	162.1	96.4	65.7	35.7
July 3	6.88	19.25	20.25	147.4	9.2	8.5	165.1	94.2	70.9	40.9
July 10	6.72	17.75	19.75	144.0	8.5	8.3	160.8	96.1	64.7	34.7
July 17	7.40	18.75	20.75	158.6	9.0	8.7	176.3	109.5	66.8	33.8
July 24	7.42	21.75	23.50	159.0	10.4	9.9	179.3	108.5	70.8	40.8
July 31	7.48	21.75	23.75	160.3	10.4	10.0	180.7	112.2	68.5	38.5
Aug. 7	7.62	22.25	24.25	163.3	10.7	10.2	184.2	122.0	62.2	32.2
Aug. 14	7.80	24.00	25.75	167.1	11.5	10.8	189.4	117.5	71.9	41.9
Aug. 21	7.45	22.75	23.00	159.6	10.9	9.7	180.2	118.2	62.0	32.0
Aug. 28	7.38	22.50	22.75	158.1	10.8	9.6	178.5	115.8	62.7	32.7
Sept. 4	7.45	23.00	23.25	159.6	11.0	9.8	180.4	118.0	62.4	32.4
Sept. 11	7.58	23.75	24.00	162.4	11.4	10.1	183.9	121.4	62.5	32.5
Sept. 18	7.58	21.75	21.88	162.4	10.4	9.2	182.0	118.0	64.0	34.0
Sept. 25	7.40	21.25	21.25	158.6	10.2	8.9	177.7	116.4	61.3	31.3
Oct. 2	7.48	20.75	20.75	160.3	10.0	8.7	179.0	113.4	65.6	35.6
Oct. 9	7.30	21.00	21.00	156.4	10.1	8.8	175.3	111.6	63.7	33.7
Oct. 16	7.40	21.75	21.75	158.6	10.4	9.1	178.1	115.2	62.9	32.9
Oct. 23	7.30	22.00	22.25	156.4	10.6	9.3	176.3	111.8	64.5	34.5
Oct. 30	7.10	21.75	21.75	152.1	10.4	9.1	171.6	110.2	61.4	31.4
Nov. 6	7.15	22.75	23.25	153.2	10.9	9.8	173.9	[2] 112.5	61.4	31.4
Nov. 13	7.25	23.50	24.00	155.4	11.3	10.1	176.8	111.2	65.6	35.6
Nov. 20	7.35	24.25	25.25	157.5	11.6	10.6	179.7	109.9	69.8	39.8
Nov. 27	7.25	24.75	26.25	155.4	11.9	11.0	178.3	109.2	69.1	39.1
Dec. 4	7.22	26.25	28.75	154.7	12.6	12.1	179.4	111.2	68.2	38.2
Dec. 11	7.38	28.75	30.75	158.1	13.8	12.9	184.8	114.0	70.8	40.8
Dec. 18	7.20	29.00	31.00	154.3	13.9	13.0	181.2	111.9	69.3	39.3
Dec. 25	7.20	28.75	30.50	154.3	13.8	12.8	180.9	[3] 112.0	68.9	38.9
1935										
Jan. 2	7.28	28.25	29.50	156.0	13.6	12.4	182.0	111.9	70.1	40.1
Jan. 8	7.32	28.50	28.75	156.9	13.7	12.1	182.7	114.5	68.2	38.2
Jan. 15	7.40	27.50	27.75	158.6	13.2	11.7	183.5	111.1	72.4	42.4
Jan. 22	7.32	27.25	27.00	156.9	13.1	11.3	181.3	112.6	68.7	38.7

[2] Nov. 5.
[3] Dec. 24.

TABLE 6.—*Flour, feed, and wheat: Prices at Minneapolis, by weeks, July 7, 1931, to July 29, 1936*—Continued

Date	Mill products							Wheat, No. 1 Dark Northern Spring, 13 percent protein per bushel	Spread (total value of products per bushel minus value of wheat)	Spread per bushel minus tax of 30 cents
	Prices in units usually quoted			Prices in terms of amounts produced from 1 bushel of spring wheat						
	Flour, standard spring patent, per barrel	Bran, spring, per ton	Middlings, standard, per ton	Flour, per 42 pounds	Bran, per 9.6 pounds	Middlings, per 8.4 pounds	Total value of products, per 60 pounds			
1935	*Dollars*	*Dollars*	*Dollars*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*
Jan. 29	7.25	26.75	26.50	155.4	12.8	11.1	179.3	110.9	68.4	38.4
Feb. 5	7.22	26.25	25.75	154.7	12.6	10.8	178.1	110.2	67.9	37.9
Feb. 12	7.20	26.25	25.75	154.3	12.6	10.8	177.7	[4] 110.6	67.1	37.1
Feb. 19	7.45	26.25	26.25	159.6	12.6	11.0	183.2	113.1	70.1	40.1
Feb. 26	7.25	26.50	26.00	155.4	12.7	10.9	179.0	112.1	66.9	36.9
Mar. 5	7.22	26.00	25.50	154.7	12.5	10.7	177.9	110.9	67.0	37.0
Mar. 12	7.10	24.75	24.75	152.1	11.9	10.4	174.4	108.6	65.8	35.8
Mar. 19	7.05	24.75	24.75	151.1	11.9	10.4	173.4	108.1	65.3	35.3
Mar. 26	7.22	25.25	25.00	154.7	12.1	10.5	177.3	111.6	65.7	35.7
Apr. 2	7.32	24.50	24.75	156.9	11.8	10.4	179.1	112.5	66.6	36.6
Apr. 9	7.30	24.75	24.75	156.4	11.9	10.4	178.7	113.0	65.7	35.7
Apr. 16	7.58	25.50	25.75	162.4	12.2	10.8	185.4	118.4	67.0	37.0
Apr. 23	7.65	27.00	28.50	163.9	13.0	12.0	188.9	117.4	71.5	41.5
Apr. 30	7.55	26.00	27.75	161.8	12.5	11.7	186.0	119.5	66.5	36.5
May 7	7.62	26.00	28.25	163.3	12.5	11.9	187.7	117.0	70.7	40.7
May 14	7.30	26.00	29.25	156.4	12.5	12.3	181.2	115.4	65.8	35.8
May 21	7.08	26.00	29.75	151.7	12.5	12.5	176.7	114.1	62.6	32.6
May 28	7.10	23.00	27.25	152.1	11.0	11.4	174.5	105.9	68.6	38.6
June 4	6.95	22.25	26.00	148.9	10.7	10.9	170.5	105.5	65.0	35.0
June 11	7.00	21.50	24.88	150.0	10.3	10.4	170.7	105.2	65.5	35.5
June 18	6.75	21.25	24.75	144.6	10.2	10.4	165.2	100.6	64.6	34.6
June 25	6.78	18.50	22.50	145.3	8.9	9.4	163.6	97.1	66.5	36.5
July 2	7.22	18.25	22.00	154.7	8.8	9.2	172.7	107.2	65.5	35.5
July 9	7.08	17.50	20.50	151.7	8.4	8.6	168.7	106.9	61.8	31.8
July 16	7.25	17.00	19.25	155.4	8.2	8.1	171.7	108.0	63.7	33.7
July 23	7.55	17.00	19.00	161.8	8.2	8.0	178.0	105.0	73.0	43.0
July 30	8.10	16.75	18.75	173.6	8.0	7.9	189.5	118.9	70.6	40.6
Aug. 6	8.18	16.75	18.00	175.3	8.0	7.6	190.9	129.4	61.5	31.5
Aug. 13	8.075	15.75	17.50	173.0	7.6	7.4	188.0	120.4	67.6	37.6
Aug. 20	8.05	16.00	17.25	172.5	7.7	7.2	187.4	121.4	66.0	36.0
Aug. 27	8.10	15.25	17.50	173.6	7.3	7.4	188.3	126.6	61.7	31.7
Sept. 3	8.00	14.25	15.50	171.4	6.8	6.5	184.7	123.8	60.9	30.9
Sept. 10	8.30	14.75	15.75	177.9	7.1	6.6	191.6	128.4	63.2	33.2
Sept. 17	8.65	15.00	17.75	185.4	7.2	7.5	200.1	133.2	66.9	36.9
Sept. 24	8.575	15.25	18.25	183.8	7.3	7.7	198.8	132.5	66.3	36.3
Oct. 1	8.50	14.75	16.75	182.1	7.1	7.0	196.2	136.0	60.2	30.2
Oct. 8	8.75	16.25	18.25	187.5	7.8	7.7	203.0	132.6	70.4	40.4
Oct. 15	8.45	15.75	17.00	181.1	7.6	7.1	195.8	129.8	66.0	36.0
Oct. 22	8.45	15.25	16.25	181.1	7.3	6.8	195.2	129.5	65.7	35.7
Oct. 29	8.25	15.25	15.75	176.8	7.3	6.6	190.7	125.4	65.3	35.3
Nov. 5	8.075	15.50	15.75	173.0	7.4	6.6	187.0	121.8	65.2	35.2
Nov. 12	7.975	15.00	15.25	170.9	7.2	6.4	184.5	119.6	64.9	34.9
Nov. 19	8.175	15.25	15.25	175.2	7.3	6.4	188.9	125.4	63.5	33.5
Nov. 26	8.375	16.25	16.25	179.5	7.8	6.8	194.1	127.5	66.6	36.6
Dec. 3	8.175	16.00	16.00	175.2	7.7	6.7	189.6	126.0	63.6	33.6
Dec. 10	8.075	16.25	16.50	173.0	7.8	6.9	187.7	122.8	64.9	34.9
Dec. 17	8.225	16.62	16.88	176.2	8.0	7.1	191.3	124.9	66.4	36.4
Dec. 24	8.225	16.00	16.50	176.2	7.7	6.9	190.8	125.2	65.6	35.6
Dec. 31	8.325	16.00	16.50	178.4	7.7	6.9	193.0	127.6	65.4	35.4
1936										
Jan. 7	7.375	-------	16.75	158.0	-------	7.0	-------	131.0	-------	-------
Jan. 14	7.125	15.62	15.88	152.7	7.5	6.7	166.9	128.8	38.1	-------
Jan. 21	7.125	15.75	15.75	152.7	7.6	6.6	166.9	128.6	38.3	-------
Jan. 28	7.125	15.00	15.25	152.7	7.2	6.4	166.3	130.4	35.9	-------
Feb. 4	7.125	15.25	15.50	152.7	7.3	6.5	166.5	130.0	36.5	-------
Feb. 11	7.000	15.25	15.50	150.0	7.3	6.5	163.8	127.2	36.6	-------
Feb. 18	6.900	15.50	15.75	147.9	7.4	6.6	161.9	127.8	34.1	-------
Feb. 25	6.950	16.25	16.75	148.9	7.8	7.0	163.7	127.9	35.8	-------
Mar. 4	7.125	16.25	16.375	152.7	7.8	6.9	167.4	127.3	40.1	-------
Mar. 11	7.05	15.50	15.75	151.1	7.4	6.6	165.1	122.2	42.9	-------
Mar. 18	7.05	15.75	16.00	151.1	7.6	6.7	165.4	118.8	46.6	-------
Mar. 25	6.80	15.50	15.50	145.7	7.4	6.5	159.6	113.5	46.1	-------
Apr. 1	6.575	15.50	15.75	140.9	7.4	6.6	154.9	111.1	43.8	-------

[4] Feb. 11.

TABLE 6.—*Flour, feed, and wheat: Prices at Minneapolis, by weeks, July 7, 1931 to July 29, 1936*—Continued

Date	Mill products							Wheat, No. 1 Dark Northern Spring, 13 percent protein, per bushel	Spread (total value of products per bushel minus value of wheat)	Spread per bushel minus tax of 30 cents
	Prices in units usually quoted			Prices in terms of amounts produced from 1 bushel of spring wheat						
	Flour, standard spring patent, per barrel	Bran, spring, per ton	Middlings, standard, per ton	Flour, per 42 pounds	Bran, per 9.6 pounds	Middlings, per 8.4 pounds	Total value of products, per 60 pounds			
1936	*Dollars*	*Dollars*	*Dollars*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*
Apr. 8	6.40	16.25	16.75	137.1	7.8	7.0	151.9	110.5	41.4	
Apr. 15	6.325	18.375	18.375	135.5	8.8	7.7	152.0	112.8	39.2	
Apr. 22	6.65	17.75	18.125	142.5	8.5	7.6	158.6	115.4	43.2	
Apr. 29	6.425	17.25	17.50	137.7	8.3	7.4	153.4	111.6	41.8	
May 6	6.325	16.25	18.25	135.5	7.8	7.7	151.0	110.9	40.1	
May 13	6.00	15.875	18.875	128.6	7.6	7.9	144.1	103.1	41.0	
May 20	5.95	14.50	17.50	127.5	7.0	7.4	141.9	104.8	37.1	
May 27	6.00	13.625	17.25	128.6	6.5	7.2	142.3	103.2	39.1	
June 3	6.05	13.25	17.125	129.6	6.4	7.2	143.2	105.9	37.3	
June 10	5.90	14.75	19.25	126.4	7.1	8.1	141.6	106.2	35.4	
June 17	6.25	16.00	22.50	133.9	7.7	9.4	151.0	113.5	37.5	
June 24	6.75	19.00	25.50	144.6	9.1	10.7	164.4	115.6	48.8	
July 1	6.45	20.75	25.25	138.2	10.0	10.6	158.8	119.0	39.8	
July 8	6.80	22.50	26.75	145.7	10.8	11.2	167.7	128.9	38.8	
July 15	6.80	28.25	30.50	145.7	13.6	12.8	172.1	129.8	42.3	
July 22	6.80	27.00	29.25	145.7	13.0	12.3	171.0	128.2	42.8	
July 29	6.80	22.25	22.25	145.7	10.7	9.3	165.7	132.5	33.2	

Source: Bureau of Agricultural Economics. Flour and feed prices compiled from the Northwestern Miller.

TABLE 7.—*Wheat: Average price per bushel, Chicago and Liverpool, and margin between these prices, by months, July 1922 to January 1937*

Month	No. 2 hard winter, Chicago	Parcels, Liverpool [1]	Margin, Chicago over Liverpool	Month	No. 2 hard winter, Chicago	Parcels, Liverpool [1]	Margin, Chicago over Liverpool
1922–23	*Cents*	*Cents*	*Cents*	1924–25	*Cents*	*Cents*	*Cents*
July	114.1	141.8	−27.7	January	187.4	199.3	−11.9
August	107.6	129.1	−21.5	February	190.2	204.8	−14.6
September	104.8	122.0	−17.2	March	174.8	191.8	−17.0
October	114.6	134.3	−19.7	April	153.4	170.3	−16.9
November	119.2	136.9	−17.7	May	170.4	184.2	−13.8
December	124.8	140.8	−16.0	June	165.5	178.3	−12.8
January	118.8	137.8	−19.0				
February	120.3	135.7	−15.4	1925–26			
March	120.2	134.7	−14.5	July	154.6	168.4	−13.8
April	125.4	140.7	−15.3	August	162.2	172.2	−10.0
May	119.3	138.6	−19.3	September	152.2	158.9	−6.7
June	110.2	131.4	−21.2	October	154.0	148.5	5.5
				November	161.4	164.3	−2.9
1923–24				December	176.7	184.7	−8.0
July	99.1	122.8	−23.7	January	182.5	180.6	1.9
August	101.4	119.6	−18.2	February	176.5	175.1	1.4
September	106.8	118.9	−12.1	March	166.4	160.8	5.6
October	110.6	120.8	−10.2	April	167.3	170.9	−3.6
November	107.2	118.9	−11.7	May	165.8	173.1	−7.3
December	106.6	117.2	−10.6	June	156.1	168.8	−12.7
January	110.5	121.0	−10.5				
February	111.5	124.4	−12.9	1926–27			
March	110.8	119.6	−8.8	July	145.5	166.9	−21.4
April	107.7	119.6	−11.9	August	137.8	162.4	−24.6
May	108.9	121.2	−12.3	September	136.8	159.6	−22.8
June	113.9	125.8	−11.9	October	144.3	171.3	−27.0
				November	140.6	170.9	−30.3
1924–25				December	142.4	163.5	−21.1
July	130.0	140.8	−10.8	January	143.2	160.2	−17.0
August	129.1	151.5	−22.4	February	140.5	157.1	−16.6
September	128.6	154.7	−26.1	March	137.9	155.5	−17.6
October	144.6	173.8	−29.2	April	136.9	155.9	−19.0
November	145.2	176.3	−31.1	May	146.9	164.6	−17.7
December	163.8	182.9	−19.1	June	148.6	165.2	−16.6

[1] Parcels are less than cargo lots.

TABLE 7.—*Wheat. Average price per bushel, Chicago and Liverpool, and margin between these prices, by months, July 1922 to January 1937*—Continued

Month	No. 2 hard winter, Chicago	Parcels, Liverpool [1]	Margin, Chicago over Liverpool
1927–28	*Cents*	*Cents*	*Cents*
July	139.4	161.4	−22.0
August	138.8	159.5	−20.7
September	132.9	150.9	−18.0
October	127.4	149.4	−22.0
November	128.2	147.0	−18.8
December	130.4	147.5	−17.1
January	129.6	149.5	−19.9
February	133.3	145.8	−12.5
March	141.3	151.0	−9.7
April	155.7	159.0	−3.3
May	159.5	155.1	4.4
June	144.9	146.9	−2.0
1928–29			
July	122.7	140.8	−18.1
August	113.9	125.8	−11.9
September	115.0	125.8	−10.8
October	117.8	128.6	−10.8
November	118.6	128.9	−10.3
December	119.6	126.3	−6.7
January	124.5	130.6	−6.1
February	128.3	134.7	−6.4
March	124.3	131.4	−7.1
April	117.4	124.9	−7.5
May	108.4	115.7	−7.3
June	113.0	116.8	−3.8
1929–30			
July	139.9	140.8	−.9
August	130.2	142.1	−11.9
September	130.6	137.4	−6.8
October	126.9	136.0	−9.1
November	120.7	127.4	−6.7
December	126.4	140.8	−14.4
January	123.4	139.8	−16.4
February	117.0	124.6	−7.6
March	106.3	117.5	−11.2
April	106.1	120.1	−14.0
May	102.9	114.6	−11.7
June	100.1	109.9	−9.8
1930–31			
July	87.9	104.3	−16.4
August	89.0	105.6	−16.6
September	84.6	91.4	−6.8
October	79.6	85.7	−6.1
November	75.3	80.6	−5.3
December	77.4	73.5	3.9
January	80.0	68.1	11.9
February	78.5	70.2	8.3
March	78.7	67.0	11.7
April	81.7	70.7	11.0
May	82.8	72.2	10.6
June	77.8	66.6	11.2
1931–32			
July	52.3	62.0	−9.7
August	49.2	52.8	−3.6
September	49.8	53.0	−3.2
October	53.7	58.3	−4.6
November	64.3	66.9	−2.6
December	55.2	57.5	−2.3
January	58.1	56.1	2.0
February	58.7	59.9	−1.2
March	58.2	63.6	−5.4
April	58.9	63.7	−4.8
May	57.0	61.3	−4.3
June	51.6	54.7	−3.1
1932–33			
July	48.8	53.9	−5.1
August	53.0	57.4	−4.4
September	54.6	59.2	−4.6
October	50.7	54.7	−4.0
November	47.1	52.0	−4.9
December	47.4	48.6	−1.2
January	48.8	50.2	−1.4
February	47.6	47.2	.4
March	53.7	47.5	6.2
April	63.8	51.7	12.1
May	73.0	61.0	12.0
June	79.6	62.7	16.9
1933–34			
July	99.6	79.2	20.4
August	94.2	67.3	26.9
September	87.3	72.8	14.5
October	83.1	[2] 60.5	22.6
November	88.4	68.3	20.1
December	84.9	65.4	19.5
January	89.8	69.3	20.5
February	91.4	66.2	25.2
March	88.2	67.0	21.2
April	85.2	68.0	17.2
May	92.1	66.7	25.4
June	93.8	67.1	26.7
1934–35			
July	98.3	76.1	22.2
August	109.1	93.9	15.2
September	111.5	85.8	25.7
October	106.5	76.7	29.8
November	107.3	76.0	31.3
December	106.3	80.8	25.5
January	107.0	78.3	28.7
February	104.9	[2] 76.0	28.9
March	103.1	80.2	22.9
April	107.8	[2] 80.0	27.8
May	102.0	84.0	18.0
June	93.2	79.0	14.2
1935–36			
July	95.7	[2] 80.6	15.1
August	102.3	[2] 86.0	16.3
September	114.8	[2] 91.2	23.6
October	124.0	[2] 98.6	25.4
November	113.7	[2] 86.3	27.4
December	113.3	[2] 93.1	20.2
January	118.0	[2] 99.2	18.8
February	112.8	91.4	21.4
March	107.7	92.4	15.3
April	102.6	[2] 89.1	13.5
May	98.0	86.8	11.2
June	92.9	85.9	7.0
1936–37			
July	110.7	[2] 99.9	10.8
August	119.5	[2] 115.3	4.2
September	119.1	[2] 113.6	5.5
October	120.6	[2] 119.3	1.3
November	123.3	[2] 115.1	8.2
December	134.2	128.6	5.6
January	141.1	132.4	8.7

[1] Parcels are less than cargo lots.
[2] Excluding occasional "on sample" prices.

Source: Bureau of Agricultural Economics.

Compiled as follows: Chicago—Chicago Daily Trade Bulletin. Average of daily prices weighted by carlot sales. Liverpool—Broomhall's Corn Trade News, Liverpool. Simple average of daily sales prices of parcels. Converted from shillings per quarter of 480 pounds to cents per bushel of 60 pounds, as follows: July 1922 to December 1925, current monthly average rates of exchange; January 1926 to August 1931, at par (par shilling=24.3328 cents); September 1931, current monthly average rates of exchange. $\left(\frac{\text{Quotation}\times\text{exchange}\times 60}{480}\right)$ =cents per bushel; or reduced to a factor (Quotation×exchange×0.125=cents per bushel).

TABLE 8.—*Wheat milled for domestic use, flour prices and index numbers of income of industrial workers, 1924–25 to 1935–36*

Year beginning July 1—	Wheat milled [1] (bushels)	Average price of flour per barrel at Minneapolis and Kansas City [2]	Index numbers of income of industrial workers (1924–29=100) [3]	Year beginning July 1—	Wheat milled [1] (bushels)	Average price of flour per barrel at Minneapolis and Kansas City [2]	Index numbers of income of industrial workers (1924–29=100) [3]
1924–25	475, 000, 000	$7.94	94.0	1930–31	481, 000, 000	4.78	77.3
1925–26	489, 900, 000	8.36	100.5	1931–32	473, 700, 000	3.84	56.8
1926–27	493, 400, 000	7.42	101.8	1932–33	481, 000, 000	3.86	40.6
1927–28	494, 400, 000	7.36	98.5	1933–34	435, 200, 000	6.47	54.7
1928–29	500, 000, 000	6.29	102.6	1934–35	442, 900, 000	6.66	60.9
1929–30	495, 800, 000	6.48	100.8	1935–36 [4]	460, 000, 000	6.78	68.8

[1] Wheat milled for domestic retention, Food Research Institute.
[2] Simple average of winter wheat straights, Kansas City, and spring wheat family patents, Minneapolis.
[3] Year beginning June.
[4] Preliminary.

Source: Bureau of Agricultural Economics.

TABLE 9.—*Mill Products: Prices at Winnipeg and Minneapolis, by months, July 1931 to July 1936*

SHORTS, PER SHORT TON AT WINNIPEG

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1931	-------	-------	-------	-------	-------	-------	$16.00	$14.40	$14.00	$13.00	$17.20	$15.75
1932	$14.50	$15.00	$16.00	$19.50	$18.80	$17.00	16.00	16.00	16.00	14.00	14.00	14.00
1933	14.00	14.00	14.00	14.50	16.00	16.00	21.00	22.80	17.50	15.80	16.00	17.00
1934	17.40	22.25	21.00	21.00	19.40	20.50	21.00	23.25	24.00	23.20	23.00	26.00
1935	27.80	26.00	25.00	23.00	25.75	23.00	21.40	19.00	19.00	19.00	19.00	19.00
1936	18.00	17.00	17.00	17.00	18.00	18.00	23.75	-------	-------	-------	-------	-------

MIDDLINGS, PER SHORT TON AT MINNEAPOLIS (STANDARD)

1931	-------	-------	-------	-------	-------	-------	$10.81	$10.05	$10.19	$9.44	$14.05	$12.75
1932	$12.06	$10.56	$12.45	$13.19	$10.45	$9.38	8.78	9.17	8.38	7.84	7.90	7.44
1933	7.70	8.50	10.62	10.94	12.03	12.28	19.06	18.95	15.31	14.40	14.69	12.62
1934	14.65	15.75	17.62	17.44	16.50	21.50	21.60	23.94	22.60	21.50	24.69	30.25
1935	27.90	25.94	25.00	26.30	28.62	24.53	19.90	17.56	16.81	16.80	15.62	16.48
1936	15.91	15.88	15.88	17.69	17.97	21.92	27.19	-------	-------	-------	-------	-------

BRAN, PER SHORT TON AT WINNIPEG (SPRING)

1931	-------	-------	-------	-------	-------	-------	$15.00	$13.40	$13.00	$12.00	$16.20	$14.75
1932	$14.00	$14.00	$15.00	$18.50	$17.80	$16.25	15.00	15.00	15.00	13.00	13.00	13.00
1933	13.00	13.00	13.00	13.50	15.00	15.00	20.25	20.80	15.75	14.80	15.00	16.00
1934	16.40	20.00	20.00	20.00	18.40	19.50	20.00	22.25	23.00	22.20	22.00	25.00
1935	26.80	25.00	24.00	22.20	25.75	23.00	21.40	19.00	19.00	19.00	19.00	19.00
1936	18.00	17.00	17.00	17.00	18.00	18.00	21.75	-------	-------	-------	-------	-------

BRAN, PER SHORT TON AT MINNEAPOLIS (SPRING)

1931	-------	-------	-------	-------	-------	-------	$10.03	$10.30	$9.75	$9.44	$13.65	$12.75
1932	$12.62	$11.00	$13.15	$13.38	$10.50	$9.38	8.25	8.57	8.19	7.78	7.87	7.78
1933	8.05	9.25	11.12	11.31	11.82	11.47	17.50	16.85	14.00	13.25	13.56	12.69
1934	14.60	16.12	18.81	18.19	17.10	20.88	19.85	22.88	22.44	21.45	23.81	28.19
1935	27.65	26.31	25.19	25.55	25.25	20.88	17.30	15.94	14.81	15.45	15.50	16.17
1936	15.46	15.56	15.70	17.41	15.06	16.75	25.00	-------	-------	-------	-------	-------

FLOUR, PER BARREL AT WINNIPEG (SPRING TOP PATENT)

1931	-------	-------	-------	-------	-------	-------	$4.85	$4.61	$4.50	$4.08	$4.56	$4.48
1932	$4.45	$4.22	$4.36	$4.31	$4.35	$4.22	4.15	4.09	3.67	3.52	3.42	3.30
1933	3.36	3.42	3.60	3.72	4.32	4.58	5.40	5.38	4.87	4.38	4.62	4.38
1934	4.58	4.65	4.55	4.48	4.58	4.70	5.00	5.05	4.75	4.80	4.78	4.85
1935	4.80	4.85	5.00	5.24	5.20	4.92	4.96	5.18	5.35	5.74	5.70	5.47
1936	5.40	5.30	5.30	5.28	5.20	5.08	5.65	-------	-------	-------	-------	-------

TABLE 9.—*Mill products: Prices at Winnipeg and Minneapolis, by months, July 1931 to July 1936*—Continued

FLOUR, PER BARREL AT MINNEAPOLIS (SPRING FIRST PATENT)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1931	-------	-------	-------	-------	-------	-------	$4.55	$4.56	$4.58	$4.60	$5.12	$4.83
1932	$4.89	$4.94	$4.66	$4.84	$4.74	$4.47	4.34	4.50	4.47	4.26	4.04	4.05
1933	4.07	4.02	4.36	4.86	5.34	5.82	7.93	7.60	7.46	7.06	7.24	6.97
1934	7.18	7.15	7.05	6.66	7.14	7.43	7.54	7.86	7.92	7.65	7.62	7.59
1935	7.62	7.61	7.38	7.72	7.44	7.10	7.73	8.24	8.62	8.81	8.48	8.60
1936	7.49	7.43	7.18	6.66	6.32	6.58	7.09	-------	-------	-------	-------	-------

Source: Bureau of Agricultural Economics; compiled from the Northwestern Miller.

TABLE 10.—*Spring wheat and mill products: Price margins, Minneapolis over Winnipeg, by months, July 1931 to July 1936*

Month	Wheat, in terms of flour per barrel [1]	Flour per barrel [2]	Bran per ton	Middlings per ton [3]
1931				
July	$0.77	−$0.30	−$4.97	−$5.19
August	.93	−.05	−3.10	−4.35
September	1.30	.08	−3.25	−3.81
October	1.27	.52	−2.56	−3.56
November	1.32	.56	−2.55	−3.15
December	1.45	.35	−2.00	−3.00
1932				
January	1.57	.44	−1.38	−2.44
February	1.35	.72	−3.00	−4.44
March	1.07	.30	−1.85	−3.55
April	1.11	.53	−5.12	−6.31
May	1.06	.39	−7.30	−8.35
June	1.00	.25	−6.87	−7.62
July	.73	.19	−6.75	−7.22
August	.64	.41	−6.43	−6.83
September	.73	.80	−6.81	−7.62
October	.61	.74	−5.22	−6.16
November	.59	.62	−5.13	−6.10
December	.76	.75	−5.22	−6.56
1933				
January	.75	.71	−4.95	−6.30
February	.70	.60	−3.75	−5.50
March	.75	.76	−1.88	−3.38
April	1.06	1.14	−2.19	−3.56
May	1.08	1.02	−3.18	−3.97
June	1.11	1.24	−3.53	−3.72
July	1.52	2.53	−2.75	−1.94
August	1.25	2.22	−3.95	−3.85
September	1.36	2.59	−1.75	−2.19
October	1.42	2.68	−1.55	−1.40
November	1.27	2.62	−1.44	−1.31
December	1.36	2.59	−3.31	−4.38
1934				
January	1.45	2.60	−1.80	−2.75
February	1.37	2.50	−3.88	−6.50
March	1.27	2.50	−1.19	−3.38
April	1.09	2.18	−1.81	−3.56
May	1.33	2.56	−1.30	−2.90
June	1.51	2.73	1.38	1.00
July	1.42	2.54	−.15	.60
August	1.73	2.81	.63	.69
September	1.94	3.17	−.56	−1.40
October	1.95	2.85	−.75	−1.70
November	1.84	2.84	1.81	1.69
December	2.04	2.74	3.19	4.25
1935				
January	2.17	2.82	.85	.10
February	2.02	2.76	1.31	−.06
March	1.81	2.38	1.19	-------
April	1.80	2.48	3.35	3.30
May	1.79	2.24	−.50	2.87
June	1.47	2.18	−2.12	1.53
July	1.88	2.77	−4.10	−1.50
August	2.37	3.06	−3.06	−1.44
September	2.37	3.27	−4.19	−2.19
October	2.45	3.07	−3.55	−2.20
November	2.37	2.78	−3.50	−3.38
December	2.41	3.13	−2.83	−2.52
1936				
January	2.54	2.09	−2.54	−2.09
February	2.59	2.13	−1.44	−1.12
March	2.28	1.88	−1.30	−1.12
April	2.27	1.38	.41	.69
May	2.02	1.12	−2.94	−.03
June	2.39	1.50	−1.25	3.92
July	2.32	1.44	3.25	3.44

[1] No. 1 Dark Northern Spring and No. 3 Manitoba Northern; converted to terms of flour on basis of 4.7 bushels of wheat, the equivalent to 1 barrel of flour.
[2] First Patent, Minneapolis, and Top Patent, Winnipeg.
[3] Standard Middlings, Minneapolis, and Shorts, Winnipeg.

Source: Bureau of Agricultural Economics. Compiled as follows: Wheat, based on data from Minneapolis Daily Market Record; flour, bran, and middlings, based on data from Northwestern Miller.

TABLE 11.—*Flour, wheat: Average wholesale and retail price per pound, Minneapolis, by months, July 1931 to July 1936*

Year and month	Wholesale [1]	Retail [2]	Spread	Year and month	Wholesale [1]	Retail [2]	Spread
1931	*Cents*	*Cents*	*Cents*	1934			
July	2.1	3.2	1.1		*Cents*	*Cents*	*Cents*
August	2.1	3.2	1.1	January	3.3	4.5	1.2
September	2.2	3.2	1.0	February	3.5	4.3	.8
October	2.2	3.0	.8	March	3.4	4.5	1.1
November	2.5	3.1	.6	April	3.2	4.6	1.4
December	2.3	3.2	.9	May	3.5	4.4	.9
				June	3.6	5.0	1.4
1932				July	3.7	5.0	1.3
				August	3.8	5.0	1.2
January	2.3	3.2	.9	September	3.8	5.1	1.3
February	2.4	3.0	.6	October	3.7	5.1	1.4
March	2.2	3.0	.8	November	3.7	5.2	1.5
April	2.3	3.0	.7	December	3.7	5.1	1.4
May	2.3	3.0	.7				
June	2.1	3.0	.9	1935			
July	2.0	3.0	1.0				
August	2.1	3.0	.9	January	3.7	5.1	1.4
September	2.1	3.0	.9	February	3.7	5.1	1.4
October	2.0	3.0	1.0	March	3.6	5.0	1.4
November	1.9	2.9	1.0	April	3.8	4.9	1.1
December	1.9	2.7	.8	May	3.7	5.0	1.3
				June	3.5	4.9	1.4
1933				July	3.8	4.8	1.0
				August	4.1	4.9	.8
January	1.9	2.7	.8	September	4.3	5.1	.8
February	1.9	2.8	.9	October	4.3	5.4	1.1
March	2.1	2.8	.7	November	4.2	5.4	1.2
April	2.3	3.0	.7	December	4.2	5.4	1.2
May	2.5	3.4	.9				
June	2.7	3.5	.8	1936			
July	3.8	4.0	.2				
August	3.6	4.7	1.1	January	3.7	5.0	1.3
September	3.5	4.8	1.3	February	3.6	4.9	1.3
October	3.4	4.9	1.5	March	3.5	4.8	1.3
November	3.5	4.5	1.0	April	3.3	4.6	1.3
December	3.4	4.5	1.1	May	3.1	4.5	1.4
				June	3.2	4.5	1.3
				July	3.5	4.4	.9

[1] Flour, standard patent, reported by Bureau of Labor, barrels divided by 196.
[2] Flour, retail, reported by Bureau of Labor, in pounds.

Source: Bureau of Agricultural Economics.

TABLE 12.—*Flour, feed, and rye: Prices at Minneapolis, by months, July 1933 to July 1936*

Date	Mill products							Rye, price of no. 2, per bushel	Spread (total value of products minus value of rye) per bushel	Spread minus tax of 30 cents per bushel
	Prices in units usually quoted [1]			Prices in terms of amounts produced from 1 bushel of spring wheat [2]						
	White rye flour, per barrel	Dark rye flour, per barrel	Rye middlings, per ton	White rye flour, per 26.65 pounds	Dark rye flour, per 14.35 pounds	Rye middlings, per 12.50 pounds	Total value of products, per 56 pounds			
1933	*Dollars*	*Dollars*	*Dollars*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*
July	5.55	4.79	16.06	75.4	35.0	10.0	120.4	83.5	36.9	--------
August	5.00	4.26	16.15	68.0	31.1	10.1	109.2	72.3	36.9	--------
September	4.98	4.22	14.19	67.7	30.8	8.9	107.4	71.3	36.1	--------
October	4.48	3.70	12.85	61.0	27.1	8.0	96.1	62.3	33.8	--------
November	4.62	3.94	12.75	62.9	28.8	8.0	99.7	62.3	37.4	--------
December	4.44	3.74	11.75	60.5	27.4	7.3	95.2	59.9	35.3	--------
1934										
January	4.70	4.06	11.65	64.0	29.7	7.3	101.0	63.7	37.3	--------
February	4.58	4.10	12.62	62.4	30.0	7.9	100.3	61.1	39.2	--------
March	4.59	3.86	13.69	62.4	28.3	8.6	99.3	59.2	40.1	--------
April	4.31	3.59	13.62	58.6	26.3	8.5	93.4	57.2	36.2	--------
May	4.33	3.60	12.25	58.9	26.4	7.6	92.9	59.8	33.1	--------
June	4.64	3.94	17.25	63.2	28.8	10.8	102.8	68.7	34.1	--------
July	4.77	4.08	18.05	64.8	29.8	11.3	105.9	73.7	32.2	--------
August	5.42	4.66	21.00	73.6	31.2	13.1	117.9	89.3	28.6	--------
September	5.28	4.64	23.00	71.7	34.0	14.4	120.1	86.7	33.4	--------
October	4.88	4.21	20.80	66.4	30.8	13.0	110.2	75.7	34.5	--------
November	4.79	4.14	23.88	65.0	30.3	14.9	110.2	76.0	34.2	--------
December	4.69	4.09	29.62	63.7	30.0	18.5	112.2	80.4	31.8	--------
1935										
January	4.51	3.97	27.95	61.3	29.1	17.5	107.9	76.2	31.7	--------
February	4.24	3.66	25.75	57.6	26.8	16.1	100.5	68.7	31.8	--------
March	4.10	3.42	25.12	55.7	25.0	15.7	96.4	61.2	35.2	--------
April	4.10	3.41	25.95	55.7	25.0	16.2	96.9	61.5	35.4	--------
May	3.80	3.18	28.06	51.7	23.2	17.5	92.4	54.3	38.1	--------
June	3.42	2.79	24.62	46.4	20.4	15.4	82.2	46.3	35.9	--------
July	3.42	2.95	20.30	46.4	21.5	12.7	80.6	48.1	32.5	--------
August	3.60	3.16	17.12	49.0	23.1	10.7	82.8	45.0	37.8	--------
September	5.04	4.34	13.25	68.5	31.7	8.3	108.5	46.5	62.0	32.0
October	5.20	4.36	15.95	70.6	31.9	10.0	112.5	51.9	60.6	30.6
November	5.06	4.15	14.81	68.8	30.4	9.3	108.5	48.6	59.9	29.9
December	5.13	4.20	15.00	69.8	30.7	9.4	109.9	49.0	60.9	30.9
1936										
January	3.85	2.97	15.19	52.2	21.8	9.5	83.5	53.5	30.0	--------
February	3.93	3.10	15.38	53.3	22.7	9.6	85.6	56.9	28.7	--------
March	3.77	2.98	15.20	51.2	21.8	9.5	82.5	52.1	30.4	--------
April	3.50	2.70	15.88	47.7	19.8	9.9	77.4	49.7	27.7	--------
May	3.54	2.19	16.25	48.2	20.4	10.2	78.8	51.7	27.1	--------
June	3.77	2.95	19.10	51.2	21.5	11.9	84.6	58.2	26.4	--------
July	4.28	3.44	23.75	58.1	25.3	14.8	98.2	75.0	23.2	--------

[1] Flour prices compiled from the Northwestern Miller, middling and rye prices from the Minneapolis Daily Market Record.

[2] Based on information received from millers: 41.0 pounds of rye flour, consisting of 65 percent white flour and 35 percent dark flour 2.5 pounds invisible loss and 12.5 pounds offal.

Source: Bureau of Agricultural Economics.

TABLE 13.—*Average price of cotton per pound, wholesale prices of specified cotton cloths obtainable per pound of cotton, and margins between these, specified periods, August 1925 to July 1936*

Item	Average					
	1925–26 to 1929–30	1931–32 to 1932–33	Aug. 1933 to Dec. 1935	4 weeks ended Jan. 3, 1936	4 weeks ended Feb. 7, 1936	6 months ended July 1936
Average of 17 constructions:	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*
Price of cloth [1]	32.82	16.60	28.85	29.26	25.34	24.76
Price of cotton [2]	18.34	6.86	11.99	12.18	12.14	12.39
Mill margin [3]	14.48	9.74	16.86	17.08	13.20	12.37
Mill margin, adjusted [4]	14.48	9.74	12.86	13.08	13.20	12.37
Combed voile (40-inch, 8.22, 60 by 56):						
Price of cloth [5]	60.68	35.04	44.19	41.04	39.30	40.24
Price of cotton [6]	22.47	8.99	14.37	14.36	14.47	14.87
Mill margin [3]	38.21	26.05	29.82	26.68	24.83	25.37
Mill margin, adjusted [4]	38.21	26.05	25.82	22.68	24.83	25.37
Print cloth (38-inch, 5.35, 64 by 60):						
Price of cloth [7]	35.92	18.08	31.26	30.50	26.75	26.09
Price of cotton [8]	19.11	7.22	12.50	12.75	12.76	13.02
Mill margin [3]	16.81	10.86	18.76	17.75	13.99	13.07
Mill margin, adjusted [4]	16.81	10.86	14.76	13.75	13.99	13.07
Sheeting (37-inch, 4, 48 by 48):						
Price of cloth [9]	28.60	14.26	25.44	26.26	22.43	21.85
Price of cotton [10]	18.16	6.69	11.80	12.01	11.95	12.18
Mill margin [3]	10.44	7.57	13.64	14.25	10.48	9.67
Mill margin, adjusted [4]	10.44	7.57	9.64	10.25	10.48	9.67
Drill (37-inch, 2.75):						
Price of cloth [11]	27.61	13.38	24.93	25.60	22.08	21.36
Price of cotton [12]	17.65	6.52	11.53	11.64	11.58	11.78
Mill margin [3]	9.96	6.86	13.40	13.96	10.50	9.58
Mill margin, adjusted [4]	9.96	6.86	9.40	9.96	10.50	9.58
Duck (8-ounce, grade A):						
Price of cloth [13]	28.30	15.19	26.55	26.67	23.12	23.30
Price of cotton [14]	16.83	6.23	11.15	11.23	11.15	11.25
Mill margin [3]	11.47	8.96	15.40	15.44	11.97	12.05
Mill margin, adjusted [4]	11.47	8.96	11.40	11.44	11.97	12.05

[1] Allowing 10.58 percent for weight lost in the manufacture of 6 print cloths; 12.46 percent for 3 sheetings and 1 sateen; 12.01 percent for 4 drills and 1 twill; 11.09 percent for one single filling duck; 15.78 percent for 1 Army duck.

[2] Middling ⅞-inch cotton plus the average grade and staple premiums and discounts on the qualities of cotton assumed to be used in each construction of cloth.

[3] Difference between the wholesale price of unfinished cotton cloth and raw cotton.

[4] Difference between the wholesale price of unfinished cotton cloth and the price of raw cotton including the processing tax of 4 cents per pound gross for the period July 28, 1933, to Jan 6, 1936.

[5] Allowing 25 percent for weight lost in manufacture.

[6] Strict Middling 1 3/16-inch cotton (staple premiums in Memphis and New Orleans).

[7] Allowing 10.58 percent for weight lost in manufacture.

[8] Strict Middling 1-inch cotton.

[9] Allowing 12.46 percent for weight lost in manufacture.

[10] Middling 1 5/16-inch cotton.

[11] Allowing 12.01 percent for weight lost in manufacture.

[12] Middling ⅞-inch cotton.

[13] Allowing 11.09 percent for weight lost in manufacture.

[14] Strict Low Middling ⅞-inch cotton.

Source: Bureau of Agricultural Economics. Cotton price is the average price at the 10 spot markets. Cloth price is the average price of the estimated quantity of cloth obtainable from a pound of raw cotton, computed from the weekly wholesale price per yard published by the International Textile-Apparel Analysis.

TABLE 14.—*Average price of raw cotton per pound, wholesale price of unfinished cotton cloth (17 constructions) obtainable per pound of cotton, and the margins between these prices, by months, 1925–26 to October 1936*

RAW COTTON PRICES [1]

Season	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July
	Cents	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*
1925–26	24.08	23.75	21.46	20.74	20.24	21.04	20.55	19.13	18.77	18.62	18.39	18.61
1926–27	18.29	16.48	13.09	12.89	12.64	13.46	14.16	14.56	14.93	16.28	16.96	18.16
1927–28	19.99	22.10	21.08	20.44	19.61	18.94	18.34	19.33	20.14	21.07	21.30	21.63
1928–29	19.12	18.19	18.91	19.24	19.53	19.34	19.36	20.26	19.44	18.88	19.12	19.38
1929–30	18.77	18.66	18.29	17.15	17.15	17.32	15.87	15.69	16.34	15.85	13.93	13.16
1930–31	11.72	10.67	10.35	10.66	9.73	9.94	10.66	10.71	10.02	9.26	9.08	9.39
1931–32	7.15	6.30	6.15	6.33	6.15	6.50	6.72	6.73	6.16	5.65	5.52	5.79
1932–33	7.33	7.64	6.71	6.31	6.03	6.27	6.19	6.59	7.10	8.80	9.60	10.84
1933–34	13.61	13.48	13.49	13.97	14.16	15.27	16.47	16.46	16.14	15.69	16.46	17.00
1934–35	17.60	17.37	16.91	17.02	17.10	17.11	17.04	16.08	16.41	16.86	16.48	16.72
1935–36	15.85	14.94	15.41	16.33	16.24	12.16	11.89	12.00	12.18	12.12	12.57	13.58
1936–37	12.72	12.63	12.72	-------	-------	-------	-------	-------	-------	-------	-------	------

WHOLESALE CLOTH PRICES [2]

1925–26	39.29	40.11	39.87	38.35	37.61	37.48	37.45	35.38	34.42	33.53	32.21	32.06
1926–27	32.90	32.82	30.54	29.23	28.41	28.77	29.48	30.02	29.93	30.69	31.77	32.30
1927–28	35.26	38.63	37.20	35.55	34.28	33.81	32.98	32.73	32.76	33.86	33.20	34.29
1928–29	33.12	32.49	33.46	33.58	33.65	33.20	32.74	33.26	32.85	31.90	31.69	31.91
1929–30	32.72	33.04	33.34	32.60	30.66	30.06	29.12	27.90	27.88	27.55	26.32	25.26
1930–31	23.73	23.64	23.86	24.08	22.78	22.12	21.90	22.49	21.82	20.91	20.31	20.55
1931–32	18.54	17.34	16.38	15.92	15.22	15.51	16.33	16.35	15.77	14.05	13.45	13.44
1932–33	15.72	17.82	16.48	14.96	14.25	14.02	13.69	14.62	15.37	19.75	24.59	28.94
1933–34	31.58	29.30	28.96	27.99	27.66	29.18	30.58	30.18	29.41	27.85	28.04	28.86
1934–35	30.21	30.95	29.73	28.72	29.04	29.24	28.76	27.72	27.60	27.93	27.59	27.15
1935–36	27.46	27.81	28.72	29.13	29.26	25.86	25.15	24.78	24.14	23.74	24.47	26.30
1936–37	26.44	26.66	27.60	-------	-------	-------	-------	-------	-------	-------	-------	------

MARGINS [3]

1925–26	15.21	16.36	18.41	17.61	17.37	16.44	16.90	16.25	15.65	14.91	13.82	13.45
1926–27	14.61	16.34	17.45	16.34	15.77	15.31	15.32	15.46	15.00	14.41	14.81	14.14
1927–28	15.27	16.53	16.12	15.11	14.67	14.87	14.64	13.40	12.62	12.79	11.90	12.66
1928–29	14.00	14.30	14.55	14.34	14.12	13.86	13.38	13.00	13.41	13.02	12.57	12.53
1929–30	13.95	14.38	15.05	15.45	13.51	12.74	13.25	12.21	11.54	11.70	12.39	12.10
1930–31	12.01	12.97	13.51	13.42	13.05	12.18	11.24	11.78	11.80	11.65	11.23	11.16
1931–32	11.39	11.04	10.23	9.59	9.07	9.01	9.61	9.62	9.61	8.40	7.93	7.65
1932–33	8.39	10.18	9.77	8.65	8.22	7.75	7.50	8.03	8.27	10.95	14.99	18.10
1933–34	17.97	15.82	15.47	14.02	13.50	13.91	14.11	13.72	13.27	12.16	11.58	11.86
1934–35	12.61	13.58	12.82	11.70	11.94	12.13	11.72	11.64	11.19	11.07	11.11	10.43
1935–36	11.61	12.87	13.31	12.80	13.02	13.70	13.26	12.78	11.96	11.62	11.90	12.72
1936–37	13.72	14.03	14.88	-------	-------	-------	-------	-------	-------	-------	-------	------

[1] Average price of Middling 7/8-inch cotton in the 10 spot markets plus the average grade and staple premiums and discounts on the qualities of cotton assumed to be used in the construction of each type of cloth. From August 1933, when the processing tax went into effect, to December 1935 a tax of 4 cents per pound gross weight is added to the price of cotton.

[2] Average price of the estimated quantity of cloth obtainable from a pound of raw cotton (that is, allowing 10.58 percent for weight lost in the manufacture of 6 print cloths; 12.46 percent for 3 sheetings and 1 sateen; 12.01 percent for 4 drills and 1 twill; 11.09 percent for 1 single filling duck; 15.78 percent for 1 army duck). Computed from the average gray cloth prices per yard quoted in the International Textile Apparel Analysis.

[3] Difference between the wholesale price of unfinished cotton cloth and raw cotton.

Source: Bureau of Agricultural Economics.

TABLE 15.—*Comparison of wholesale and retail prices and retail margins for 4 manufactured cotton items, specified periods, July 1933–May 1936*

Item	July 27, 1933	Average August 1933 to December 1935	Increase in price or margin from August 1933 to December 1935 over July 27, 1933	Approximate amount of the processing tax	Average February to May 1936 [1]	Change in price or margin for the period February to May 1936 relative to the period August 1933 to December 1935
Wholesale price:	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*
Overalls (2.2 yards denim)	[2] 119.6	139.3	19.7	8.3	142	+2.7
Sheets (81 by 99 inches)	85	82.3	−2.7	7.7	80.5	−1.8
Work shirts (chambray)	59	71.4	12.4	3.5	68.8	−2.6
Unbleached muslin (per yard)	8.5	8.5	0	1.1	7.4	−1.1
Retail price:						
Overalls (2.2 yards denim)	109	150.8	41.8	8.3	148.25	−2.55
Sheets (81 by 99 inches)	99	127.3	28.3	7.7	127	−.3
Work shirts (cambray)	73	92.8	19.8	3.5	88.25	−4.55
Unbleached muslin (per yard)	9.7	13.4	3.7	1.1	13.8	+.4
Margin between wholesale and retail price:						
Overalls (2.2 yards denim)	−10.6	11.5	22.1	----------	6.25	−5.25
Sheets (81 by 99 inches)	14	45	31	----------	46.5	+1.5
Work shirts (chambray)	14	21.4	7.4	----------	19.45	−1.95
Unbleached muslin (per yard)	1.2	4.9	3.7	----------	6.45	+1.55
Ratio of retail price to wholesale price:						
Overalls—percent	91.1	108.3	----------	----------	104.4	----------
Sheets—do	116.5	154.7	----------	----------	157.8	----------
Work shirts—do	123.7	130	----------	----------	128.3	----------
Unbleached muslin—do	114.1	157.6	----------	----------	186.5	----------
Average of 4 articles—do	111.4	137.6	----------	----------	144.2	----------

[1] Not available since May 1936.
[2] No quotation for July 27, price for previous week used.

Source: Bureau of Agricultural Economics. Retail prices based on prices obtained from 110 stores located in 25 cities. Wholesale prices from the Bureau of Labor Statistics.

TABLE 16.—*Cotton textiles: Retail prices and margins of piece goods, household goods, men's wear, and women's wear, average specified periods, 1928–29 to 1936–37*

Item	1928–29 to 1929–30	1931–32 to 1932–33	August 1933 to December 1935	February 1936 to July 1936	August 1936 to November 1936
Piece goods: [1]	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*
Price per yard	18. 89	11. 48	14. 54	14. 02	13. 12
Price of cloth obtainable from 1 pound of cotton	53. 18	32. 24	40. 37	38. 8	36. 16
Estimated cost of cotton [2]	17. 44	6. 69	11. 66	12. 09	12. 43
Margin	35. 74	25. 55	28. 71	26. 71	23. 73
Margin adjusted [3]	----------	----------	24. 71	----------	----------
Household goods: [4]					
Price per article	[5] 83	[5] 57	[6] 64	[7 8] 59	----------
Estimated cost of cotton [2]	[5] 18	[5] 7	[6] 13	[7 8] 13	----------
Margin	[5] 65	[5] 50	[6] 51	[7 8] 46	----------
Margin adjusted [3]	----------	----------	[6] 47	----------	----------
Men's wear:					
Mail-order prices: [9]					
Price per article	[10] 58	[11] 45	50	50	48
Estimated cost of cotton [2]	[10] 7	[11] 3	4. 4	5	5
Margin	[10] 51	[11] 42	45. 6	45	43
Margin adjusted [3]	----------	----------	44	----------	----------
Bureau of Labor Statistics: [12]					
Price per article	[5] 202	[5] 158	[6] 172	[7] 158	----------
Estimated cost of cotton [2]	[5] 24	[5] 9	[6] 17	[7] 18	----------
Margin	[5] 178	[5] 149	[6] 155	[7] 140	----------
Margin adjusted [3]	----------	----------	[6] 150	----------	----------
Women's wear: [13]					
Price per article	[5] 186	[5] 144	[5] 152	[7] 148	----------
Estimated cost of cotton [2]	[5] 20	[5] 8	[5] 13	[7] 15	----------
Margin	[5] 166	[5] 136	[5] 139	[7] 133	----------
Margin adjusted	----------	----------	135	----------	----------

[1] Simple average of denim (standard white-back denim) 2.20 yards to the pound, 28 inches; ticking (weight, 8 ounces to the yard, and width 32 inches); flannel (outing flannel 36 inches wide, fleeced on both sides, medium weight); bird's-eye (diaper cloth, 27 inches wide, finished); muslin (standard grade bleached muslin); and percale (plain or printed, 36 inches wide). Compiled from prices quoted in Sears Roebuck's catalogs—spring and summer catalogs considered as representing February to July and the fall and winter catalog as representing August to January, except in 1936.

[2] Prices in southern markets for the qualities most generally used in each construction.

[3] Difference between retail prices and the estimated cost of raw cotton including the processing tax from August 1933 to December 1935.

[4] Includes towels, sheets, and pillowcases. Towels are assumed to have been cotton terry, 22 by 44 inches, bleached, weighing about 5½ pounds per dozen. Sheets are assumed to have been 81 by 99 inches in size and made of bleached muslin. Pillowcases are assumed to have been 42 by 36 inches in size and made of bleached muslin. Compiled from retail prices collected by Bureau of Labor Statistics—weighted average for 32 cities in the United States.

[5] Prices are for December and June of each season.

[6] Prices are for December 1933, June and November 1934, March, July, and October 1935.

[7] Prices are for April and July 1936.

[8] Prices for pillowcases were not available for July 1936.

[9] Prices compiled from Sears Roebuck's catalogs: Include (1) work shirts described as sanforized chambray, (2) balbriggan flat-knit cotton undershirts and drawers made from carded yarn, (3) balbriggan flat-knit cotton undershirts and drawers made from combed yarn, and (4) men's dress socks made from 2-ply mercerized yarns with 4-ply lisle toe and heel, seamless feet and double soles.

[10] Data not available for the fall and winter, 1929–30, for work shirts.

[11] Data not available for the fall and winter, 1931–32, for work shirts.

[12] Includes business shirts, overalls, and pajamas. Shirts are assumed to have been cotton business shirts, collar attached, medium quality combed broadcloth, single yarns, 128 by 68. Overalls are assumed to have been Bib, cotton; 2.20 white-back denim: approximately 44 yards per dozen; preshrunk but not sanforized. Pajamas are assumed to have been made from 4.5 yards of combed broadcloth (128 by 68).

[13] Retail prices of house dresses and nightgowns collected by Bureau of Labor Statistics. Estimated costs of cotton house dresses assumed to be cotton sheers, medium quality, size 36, printed lawn, voile, batiste, or dimity; color fast; short sleeves; well made, requiring approximately 1 pound of cotton. Nightgowns are assumed to be cotton, medium quality, size 16, nainsook, batiste, or crepe; tailored or embroidery trim; full cut; approximately 52 inches long, requiring about 1 pound of cotton.

Source: Bureau of Agricultural Economics.

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TABLE 17.—*Consumption, price of Middling 7/8-inch cotton at 10 markets, and index numbers of industrial production, United States, 1921–22 to 1935–36*

Season	Consumption of all cotton [1]	Price of Middling, 7/8-inch, 10 markets [2]	Index numbers of industrial production, United States [3] (1923–25=100)	Season	Consumption of all cotton [1]	Price of Middling, 7/8-inch, 10 markets [2]	Index numbers of industrial production, United States [3] (1923–25=100)
	1,000 bales	*Cents*			*1,000 bales*	*Cents*	
1921–22	5,909.8	15.13	78.5	1931–32	4,866.0	7.01	65.9
1922–23	6,666.1	23.43	101.4	1932–33	{[4] 5,960.0 6,137.4	6.04	74.1
1923–24	5,680.6	29.27	94.3				
1924–25	6,193.4	26.09	101.8	1933–34	{[4] 5,600.0 5,700.3	[5] 12.44 9.77 [5] 16.30	78.7
1925–26	6,455.9	21.81	107.2				
1926–27	7,189.6	15.11	108.2				
1927–28	6,834.1	18.09	107.4	1934–35	5,360.0	12.30	84.7
1928–29	7,091.1	19.38	120.3	1935–36	6,351.2	11.58	100.0
1929–30	6,105.8	17.28	102.2				
1930–31	5,263.0	11.33	83.8				

[1] Season beginning August.
[2] Season beginning April.
[3] Season beginning October. Unadjusted for seasonal variation.
[4] Excludes the cotton equivalent of clothing obtained from the cotton which was given to the American Red Cross by Congress for relief; 540,000 bales were given in 1932–33 and 300,000 bales in 1933–34. The equivalent of approximately one-third of this amount of cotton was used in the clothing for which it was exchanged.
[5] Includes 4 cents processing tax, beginning with Aug. 1, 1933. Therefore 2/3 of 4 cents only is added to the average 10 market price of year beginning April 1933.

Source: Bureau of Agricultural Economics; consumption from Bureau of the Census; prices from records of the Bureau of Agricultural Economics, based on daily telegrams from each of the 10 designated spot markets; index of industrial production from the Federal Reserve Board.

TABLE 18.—*Cotton, price in United States: World supply of American and foreign and world index of industrial production, 1921–22 to date*

	Price of Middling in 10 markets	World supply, American cotton	World supply of foreign cotton [1]			World index of industrial production (1923–25=100)		
			Current season	Previous season	Average of current and previous seasons	Actual [2]	Trend	Actual as a percentage of trend
Season beginning Aug. 1:	*Cents*	*1,000 bales* [3]	*1,000 bales* [4]	*1,000 bales* [4]	*1,000 bales* [4]	*Percent*	*Percent*	*Percent*
1921–22	18.09	17,338	11,544	11,446	11,495	81.6	81.6	100.0
1922–23	25.83	14,917	13,007	11,544	12,276	94.2	85.4	110.3
1923–24	30.14	13,444	12,619	13,007	12,813	96.4	88.8	108.6
1924–25	24.22	16,335	13,905	12,619	13,262	105.2	92.1	114.2
1925–26	19.68	19,491	14,724	13,905	14,314	107.9	95.5	113.0
1926–27	14.40	23,473	14,112	14,724	14,418	114.0	98.4	115.9
1927–28	19.72	20,652	15,070	14,112	14,591	118.0	100.9	116.9
1928–29	18.67	19,591	15,887	15,070	15,478	127.9	102.7	124.5
1929–30	15.79	19,246	16,247	15,887	16,067	117.3	104.1	112.7
1930–31	9.61	20,219	16,310	16,247	16,278	100.9	105.3	95.8
1931–32	5.89	25,963	14,732	16,310	15,521	85.0	106.0	80.2
1932–33	7.15	25,961	14,675	14,732	14,704	91.8	106.8	86.0
1933–34	10.81	24,635	17,525	14,675	16,100	99.5	107.3	92.7
1934–35	12.36	20,270	18,790	17,525	18,158	105.9	107.6	98.4
1935–36	11.55	19,647	19,978	18,790	19,384	117.2	107.8	108.7

[1] Includes only the commercial crop of China.
[2] Season beginning Oct. 1.
[3] Production in bales of 478 pounds net, carry-over in running bales.
[4] Bales of approximately 478 pounds.

Source: Bureau of Agricultural Economics; prices are from records of the Bureau of Agricultural Economics based on daily telegrams from each of the 10 designated markets; supply of American and foreign cotton and index of industrial production are estimates of the Bureau of Agricultural Economics.

TABLE 19.—*Tobacco-processing tax rates, specified dates*

Class of tobacco	Processing tax rates				
	On farm sales weight (per pound)	In processing order		Date effective	Date discontinued
		Unstemmed (per pound)	Stemmed (per pound)		
	Cents	*Cents*	*Cents*		
Flue-cured:					
First domestic processing	4.2	4.7	6.1	Oct. 1, 1933	Oct. 1, 1935
Do	1.89	2.13	2.73	Oct. 1, 1935	Jan. 6, 1936
First domestic processing of part used in manufacture of plug chewing tobacco and twist	3.3	3.7	4.8	Aug. 1, 1934	Feb. 1, 1935
Do	2.0	2.3	2.9	Feb. 1, 1935	Jan. 6, 1936
Burley:					
First domestic processing	2.0	2.3	3.1	Oct. 1, 1933	Oct. 1, 1934
Do	6.1	7.0	9.5	Oct. 1, 1934	Oct. 1, 1935
Do	3.5	4.0	5.4	Oct. 1, 1935	Jan. 6, 1936
First domestic processing of part used in manufacture of plug chewing tobacco and twist	4.1	4.7	6.4	Oct. 1, 1934	Feb. 1, 1935
Do	2.5	2.9	3.9	Feb. 1, 1935	Jan. 6, 1936
Maryland:					
First domestic processing	1.7	1.8	2.4	Oct. 1, 1933	Oct. 1, 1934
Do	0.0	0.0	0.0	Oct. 1, 1934	Oct. 1, 1935
Do	3.62	3.85	5.2	Oct. 1, 1935	Jan. 6, 1936
Fire-cured:					
First domestic processing	2.9	3.2	4.1	Oct. 1, 1933	Oct. 1, 1935
Do	2.14	2.36	3.1	Oct. 1, 1935	Jan. 6, 1936
First domestic processing of part used in manufacture of chewing tobacco	2.0	2.2	2.9	Feb. 1, 1935	Do.
Dark air-cured:					
First domestic processing	3.3	3.8	5.1	Oct. 1, 1933	Do.
First domestic processing of part used in manufacture of chewing tobacco	2.0	2.3	3.1	Feb. 1, 1935	Do.
Cigar leaf:					
First domestic processing	[1] 3.0	[2] 3.75	[2] 5.0	Oct. 1, 1933	Do.
Do	----------	[3] 3.25	[3] 4.3	Feb. 1, 1935	Do.
First domestic processing of cigar-leaf manufactured into scrap chewing and/or smoking tobacco	[1] 2.0	[2] 2.5	[2] 3.3	----do----	Do.

[1] Unsweated.
[2] Sweated.
[3] When cigar-leaf processed is of the kind classified in the U. S. Department of Agriculture, Bureau of Agricultural Economics, Service and Regulatory Announcements No. 118 as Fire-cured tobacco.

Source: Bureau of Agricultural Economics.

TABLE 20.—*Average farm price of tobacco, 1922–35, average wholesale price of tobacco products, 1926–35, and coefficients of correlation with farm prices leading from 0 to 4 years*

Year	Tobacco—Average farm price per pound [1]	Tobacco products—Average wholesale price per pound [2]	Year	Tobacco—Average farm price per pound [1]	Tobacco products—Average wholesale price per pound [2]
1922	$0.228	----------	1929	$0.184	$1.513
1923	.190	----------	1930	.128	1.537
1924	.190	----------	1931	.082	1.492
1925	.168	----------	1932	.105	1.428
1926	.179	$1.468	1933	.130	1.254
1927	.207	1.491	1934	.214	1.350
1928	.200	1.485	1935	.183	1.368

COEFFICIENTS OF CORRELATION BETWEEN FARM PRICES AND WHOLESALE PRICES

Farm prices leading	Values of "r"	Farm prices leading	Values of "r"
Years:		Years—Continued	
0	−.026	2½	+.934
½	+.310	3	+.803
1	+.581	3½	+.642
1½	+.858	4	+.401
2	+.953		

[1] Crop-year basis. [2] Calendar-year basis. Source: Bureau of Agricultural Economics.

TABLE 21.—*Farm-price weights: Percentage of tobacco, by types, used in the manufacture of tobacco products, 1934*

Item	Percentage of tobacco used in the manufacture of—			
	Cigarettes	Cigars	Granulated smoking tobacco	Plug chewing tobacco
	Percent	*Percent*	*Percent*	*Percent*
Flue-cured	57.9		62.3	24.9
Burley	39.4		33.8	56.1
Maryland	2.7		3.9	
Dark air-cured				19.0
Cigar filler		67.2		
Cigar binder		23.2		
Cigar wrapper		9.6		
Total	100.0	100.0	100.0	100.0

Source: Bureau of Agricultural Economics.

TABLE 22.—*Farm prices of tobacco by types and weighted-average farm prices of tobacco used in the manufacture of cigarettes, cigars, granulated smoking tobacco, and plug chewing tobacco, 1923–35*

Year	Cigarette tobacco				Cigar tobacco			
	Flue-cured, per pound	Burley, per pound	Maryland, per pound	Weighted average per pound	Filler, per pound	Binder, per pound	Wrapper, per pound	Weighted average per pound
1923	$0.208	$0.200	$0.277	$0.207	$0.165	$0.219	$0.833	$0.242
1924	.216	.201	.227	.210	.149	.162	.731	.208
1925	.200	.180	.237	.193	.107	.153	.838	.188
1926	.249	.131	.202	.201	.099	.202	.833	.193
1927	.205	.259	.234	.227	.137	.190	.869	.220
1928	.173	.305	.272	.228	.149	.178	.763	.215
1929	.180	.218	.277	.197	.127	.204	.553	.186
1930	.120	.155	.266	.138	.083	.153	.687	.157
1931	.084	.087	.150	.087	.068	.087	.628	.126
1932	.116	.125	.168	.121	.045	.069	.507	.095
1933	.153	.105	.178	.135	.054	.086	.577	.112
1934	.273	.169	.175	.229	.090	.121	.751	.161
1935	.200	.191	.185	.196	.104	.126	.723	.169

Year	Tobacco used in granulated smoking tobacco				Tobacco used in plug chewing tobacco			
	Flue-cured	Burley	Maryland	Weighted average	Flue-cured	Burley	Dark air-cured	Weighted average
1923	$0.208	$0.200	$0.277	$0.208	$0.208	$0.200	$0.106	$0.184
1924	.216	.201	.227	.211	.216	.201	.116	.189
1925	.200	.180	.237	.195	.200	.180	.081	.166
1926	.249	.131	.202	.207	.249	.131	.072	.149
1927	.205	.259	.234	.224	.205	.259	.102	.225
1928	.173	.305	.272	.221	.173	.305	.117	.236
1929	.180	.218	.277	.197	.180	.218	.108	.188
1930	.120	.155	.266	.138	.120	.155	.079	.132
1931	.084	.087	.150	.088	.084	.087	.034	.076
1932	.116	.125	.168	.121	.116	.125	.042	.107
1933	.153	.105	.178	.138	.153	.105	.073	.111
1934	.273	.169	.175	.234	.273	.169	.076	.177
1935	.200	.191	.185	.196	.200	.191	.080	.172

Source: Bureau of Agricultural Economics.

TABLE 23.—*Wholesale prices of tobacco products, weighted-average farm prices, leading 2½ years, and processors' margins, 1926–36*

Year	Cigarettes			Cigars		
	Wholesale price (per pound)	Average farm price (per pound) 2½ years preceding	Margin (per pound)	Wholesale price (per pound)	Average farm price (per pound) 2½ years preceding	Margin (per pound)
1926	$1.952	$0.209	$1.743	$2.272	$0.225	$2.047
1927	1.945	.202	1.743	2.281	.198	2.083
1928	1.902	.197	1.705	2.239	.191	2.048
1929	1.907	.214	1.693	2.265	.207	2.058
1930	2.009	.228	1.781	2.200	.218	1.982
1931	2.075	.213	1.862	2.103	.201	1.902
1932	2.158	.168	1.990	2.083	.172	1.911
1933	1.726	.113	1.613	1.920	.142	1.778
1934	1.865	.104	1.761	1.925	.111	1.814
1935	1.868	.128	1.740	1.897	.104	1.793
1936	[1] 1.868	.182	[1] 1.686	[1] 1.889	.137	[1] 1.752

Year	Smoking			Plug			All products		
	Wholesale price (per pound)	Average farm price (per pound) 2½ years preceding	Margin (per pound)	Wholesale price (per pound)	Average farm price (per pound) 2½ years preceding	Margin (per pound)	Wholesale price (per pound)	Average farm price (per pound) 2½ years preceding	Margin (per pound)
1926	$0.924	$0.210	$0.714	$0.696	$0.187	$0.509	$1.468	$0.190	$1.278
1927	.924	.203	.721	.696	.178	.518	1.491	.179	1.312
1928	.924	.201	.723	.696	.158	.538	1.485	.173	1.312
1929	.924	.216	.708	.696	.187	.509	1.513	.193	1.320
1930	.924	.223	.701	.696	.231	.465	1.537	.203	1.334
1931	.780	.209	.571	.696	.207	.489	1.492	.192	1.300
1932	.569	.168	.401	.669	.160	.509	1.428	.156	1.272
1933	.569	.113	.456	.597	.104	.493	1.254	.105	1.149
1934	.569	.105	.464	.642	.092	.550	1.350	.093	1.257
1935	.569	.130	.439	.642	.109	.533	1.368	.117	1.251
1936	[1] .569	.186	[1] .383	[1] .642	.144	[1] .498	[1] 1.367	.172	[1] 1.195

[1] First 6 months only.

Source: Bureau of Agricultural Economics.

TABLE 24.—*Average margins between the farm price of tobacco and the wholesale price of tobacco products, and the average processing tax on farm-sales weight, specified periods*

Item	Margin per pound			Average processing tax on farm-sales weight
	Average 1933 and first half of 1936	Average 1934 and 1935	Average increase during tax period	
Cigarettes	$1.637	$1.750	$0.113	$0.039
Cigars	1.769	1.804	.035	.030
Smoking	.432	.452	.020	.038
Plug	.495	.542	.047	.027

Source: Bureau of Agricultural Economics.

TABLE 25.—*Wholesale price, per pound, of tobacco products, by months, January 1933 to June 1936*

Date	Cigarettes	Cigars	Smoking	Plug
1933—January	$1.863	$2.013	$0.569	$0.589
February	1.747	1.905	.569	.589
March	1.708	1.905	.569	.589
April	1.708	1.905	.569	.589
May	1.708	1.905	.569	.589
June	1.708	1.905	.569	.589
July	1.708	1.905	.569	.589
August	1.708	1.905	.569	.589
September	1.708	1.905	.569	.589
October	1.708	1.924	.569	.589
November	1.708	1.921	.569	.642
December	1.708	1.921	.569	.642
1934—January	1.831	1.919	.569	.642
February	1.868	1.930	.569	.642
March	1.868	1.928	.569	.642
April	1.868	1.928	.569	.642
May	1.868	1.928	.569	.642
June	1.868	1.928	.569	.642
July	1.868	1.928	.569	.642
August	1.868	1.928	.569	.642
September	1.868	1.928	.569	.642
October	1.868	1.921	.569	.642
November	1.868	1.918	.569	.642
December	1.868	1.918	.569	.642
1935—January	1.868	1.918	.569	.642
February	1.868	1.923	.569	.642
March	1.868	1.923	.569	.642
April	1.868	1.891	.569	.642
May	1.868	1.891	.569	.642
June	1.868	1.891	.569	.642
July	1.868	1.889	.569	.642
August	1.868	1.889	.569	.642
September	1.868	1.889	.569	.642
October	1.868	1.889	.569	.642
November	1.868	1.889	.569	.642
December	1.868	1.889	.569	.642
1936—January	1.868	1.889	.569	.642
February	1.868	1.889	.569	.642
March	1.868	1.889	.569	.642
April	1.868	1.889	.569	.642
May	1.868	1.889	.569	.642
June	1.868	1.889	.569	.642

Source: Bureau of Agricultural Economics.

TABLE 26.—*Retail prices, wholesale prices, and distributors' margins for tobacco products, 1926–36*

Year	Cigarettes			Cigars		
	Retail price	Wholesale price	Distributors' margin	Retail price	Wholesale price	Distributors' margin
1926	$2.52	$1.95	$0.57	$3.61	$2.27	$1.34
1927	2.49	1.94	.55	3.55	2.28	1.27
1928	2.43	1.90	.53	3.43	2.24	1.19
1929	2.36	1.91	.45	3.38	2.26	1.12
1930	2.39	2.01	.38	2.89	2.20	.69
1931	2.42	2.08	.34	2.35	2.10	.25
1932	2.53	2.16	.37	2.11	2.08	.03
1933	2.09	1.73	.36	1.93	1.92	.01
1934	2.23	1.87	.36	2.03	1.93	.10
1935	2.30	1.87	.43	1.94	1.90	.04
1936 [1]	2.29	1.87	.42	1.85	1.89	[2]—.04

[1] First 6 months only.
[2] See footnote 12, p. 43.

TABLE 26.—*Retail prices, wholesale prices, and distributors' margins for tobacco products, 1926–36*—Continued

Year	Smoking			Plug			All products		
	Retail price	Wholesale price	Distributors' margin	Retail price	Wholesale price	Distributors' margin	Retail price	Wholesale price	Distributors' margin
1926	$1.38	$0.92	$0.46	$1.17	$0.70	$0.47	$2.18	$1.50	$0.68
1927	1.36	.92	.44	1.16	.70	.46	2.17	1.53	.64
1928	1.34	.92	.42	1.16	.70	.46	2.14	1.52	.62
1929	1.35	.92	.43	1.15	.70	.45	2.12	1.55	.57
1930	1.35	.92	.43	1.12	.70	.42	2.03	1.58	.45
1931	1.24	.78	.46	1.09	.70	.39	1.88	1.53	.35
1932	.96	.57	.39	1.07	.67	.40	1.79	1.46	.33
1933	.93	.57	.36	1.02	.60	.42	1.59	1.28	.31
1934	.92	.57	.35	1.05	.64	.41	1.70	1.38	.32
1935	.91	.57	.34	1.02	.64	.38	1.74	1.39	.35
1936 [1]	.90	.57	.33	1.02	.64	.38	1.71	1.39	.32

[1] First 6 months only.

Source: Bureau of Agricultural Economics.

TABLE 27.—*All tobacco products (except snuff): Per-capita consumption in the United States related to average retail prices and to index numbers of industrial income, 1926–35*

Year	Per-capita consumption (pounds)	Retail price per pound [1]	Index numbers of income of industrial workers (1924–29=100) October-September average	Per-capita expenditure (price × consumption)
1926	7.15	$2.18	101.8	$15.59
1927	7.09	2.17	101.3	15.39
1928	7.07	2.14	98.4	15.13
1929	7.20	2.12	105.1	15.26
1930	6.90	2.03	93.1	14.01
1931	6.62	1.88	70.7	12.45
1932	6.00	1.79	48.8	10.74
1933	6.13	1.59	43.8	9.75
1934	6.53	1.70	57.3	11.10
1935	6.68	1.74	62.8	11.62

[1] Bureau of Labor Statistics average retail prices of the various products (except snuff), weighted according to the volume of tax-paid withdrawals. Retail prices of snuff were not reported.

Source: Bureau of Agricultural Economics.

TABLE 28.—*Tobacco, all types: Price paid to growers and total supply, 1922–23 to 1935–36*

Year	Price per pound to growers	Supply		
		Carry-over beginning of season (pounds)	Production (pounds)	Total (pounds)
1922–23	$0.228	1,548,500,000	1,254,300,000	2,802,800,000
1923–24	.190	1,641,600,000	1,517,600,000	3,159,200,000
1924–25	.190	1,825,500,000	1,244,900,000	3,070,400,000
1925–26	.168	1,832,000,000	1,376,000,000	3,208,000,000
1926–27	.179	1,871,700,000	1,289,300,000	3,161,000,000
1927–28	.207	1,794,300,000	1,211,300,000	3,005,600,000
1928–29	.200	1,686.100,000	1,373,200,000	3,059,300,000
1929–30	.184	1,638,300,000	1,537,300,000	3,175,600,000
1930–31	.128	1,685,100,000	1,647,400,000	3,332,500,000
1931–32	.082	1,930,000,000	1,583,600,000	3,513,600,000
1932–33	.105	2,303,700,000	1,022,800,000	3,326,500,000
1933–34	.130	2,139,000,000	1,366,200,000	3,505,200,000
1934–35	.214	2,289,000,000	1,045,700,000	3,334,700,000
1935–36	.183	2,221,000,000	1,283,700,000	3,504,700,000

Source: Bureau of Agricultural Economics.

TABLE 29—*Price comparison of specified corn products and raw cane sugar, New York, annual, 1922–33, by months, November 1931 to July 1936*

Year and month	Price per 100 pounds			Index numbers (1928–32=100)		
	Corn products		Cane sugar, raw, 96° [3]	Corn products		Cane sugar, raw, 96°
	Sirup 43° crystal [1]	Sugar, 80° [2]		Sirup 43° crystal	Sugar, 80°	
1922	$2.79	----------	$4.70	78.5	----------	133.5
1923	3.46	----------	7.00	97.4	----------	198.9
1924	3.90	----------	6.00	109.7	----------	170.5
1925	4.00	----------	4.30	112.5	----------	122.2
1926	3.32	----------	4.30	93.4	----------	122.2
1927	3.26	----------	4.70	91.7	----------	133.5
1928	4.02	$4.16	4.20	113.1	112.4	119.3
1929	4.14	4.16	3.80	116.5	112.4	108.0
1930	3.84	3.98	3.40	108.0	107.6	96.6
1931	3.17	3.47	3.30	89.2	93.8	93.8
1932	2.60	2.73	2.90	73.2	73.8	82.4
1933	2.80	2.98	3.20	78.8	80.5	90.9
1931—November	3.21	3.55	3.40	90.3	95.9	96.6
December	3.12	2.90	3.20	87.8	78.4	90.9
1932—January	2.77	2.83	3.10	77.9	76.5	88.1
February	2.68	2.81	2.90	75.4	75.9	82.4
March	2.68	----------	2.80	75.4	----------	79.5
April	2.68	2.81	2.60	75.4	75.9	73.9
May	2.58	2.71	2.60	72.6	73.2	73.9
June	2.58	2.71	2.80	72.6	73.2	79.5
July	2.58	2.71	3.00	72.6	73.2	85.2
August	2.58	2.71	3.20	72.6	73.2	90.9
September	2.58	2.71	3.10	72.6	73.2	88.1
October	2.56	2.68	3.20	72.0	72.4	90.9
November	2.48	2.61	3.00	69.8	70.5	85.2
December	2.48	2.61	2.90	69.8	70.5	82.4
1933—January	2.43	2.61	2.70	68.4	70.5	76.7
February	2.43	2.61	2.80	68.4	70.5	79.5
March	2.43	2.61	3.00	68.4	70.5	85.2
April	2.61	2.79	3.10	73.4	75.4	88.1
May	2.88	3.06	3.30	81.0	82.7	93.8
June	2.88	3.06	3.40	81.0	82.7	96.6
July	2.90	3.15	3.50	81.6	85.1	99.4
August	3.03	3.21	3.50	85.3	86.8	99.4
September	3.03	3.21	3.60	85.3	86.8	102.3
October	2.90	3.08	3.30	81.6	83.2	93.8
November	2.96	3.14	3.20	83.3	84.9	90.9
December	2.99	3.17	3.20	84.1	85.7	90.9
1934—January	2.99	3.17	3.20	84.1	85.7	90.9
February	2.99	3.17	3.30	84.1	85.7	93.8
March	2.99	3.17	3.10	84.1	85.7	88.1
April	2.99	3.17	2.80	84.1	85.7	79.5
May	2.99	3.17	2.80	84.1	85.7	79.5
June	3.15	3.33	2.90	88.6	90.0	82.4
July	3.30	3.48	3.20	92.9	94.1	90.9
August	3.79	3.97	3.30	106.6	107.3	93.8
September	3.85	4.03	2.90	108.3	108.9	82.4
October	3.62	3.80	2.90	101.9	102.7	82.4
November	3.65	3.83	2.90	102.7	103.5	82.4
December	3.75	3.93	2.90	105.5	106.2	82.4
1935—January	3.75	3.93	2.80	105.5	106.2	79.5
February	3.75	3.93	2.90	105.5	106.2	82.4
March	3.73	3.89	3.00	105.0	105.1	85.2
April	3.78	3.90	3.30	106.4	105.4	93.8
May	3.78	3.94	3.30	106.4	106.5	93.8
June	3.78	3.94	3.30	106.4	106.5	93.8
July	3.78	3.94	3.30	106.4	106.5	93.8
August	3.78	3.94	3.30	106.4	106.5	93.8
September	3.78	3.94	3.50	106.4	106.5	99.4
October	3.78	3.94	3.60	106.4	106.5	102.3
November	3.60	3.73	3.50	101.3	100.8	99.4
December	3.44	3.49	3.10	96.8	94.3	88.1
1936—January	3.26	3.39	3.30	91.7	91.6	93.8
February	3.25	3.41	3.40	91.4	92.2	96.6
March	3.30	3.46	3.60	92.9	93.5	102.3
April	3.34	3.50	3.80	94.0	94.6	108.0
May	3.40	3.56	3.70	95.7	96.2	105.1
June	3.40	3.56	3.70	95.7	96.2	105.1
July	3.60	3.76	3.70	101.3	101.6	105.1

[1] Compiled from New York Journal of Commerce. Prices are averages of quotations for 1 day each week. From April 1928 through February 1929, quoted as 42° crystal.

[2] Compiled from New York Journal of Commerce. Prices are averages of quotations published on Saturdays of each week.

[3] Compiled from Bureau of Labor Statistics wholesale price bulletin, Department of Commerce.

Source: Bureau of Agricultural Economics.

TABLE 30.—*Wholesale value of certain wet-process corn products, price of corn, and spread between them, Chicago, by months, October 1931 to July 1936*

Year and month	Wholesale value				Corn, No. 3 Yellow, market price per bushel	Spread between products and corn
	Pearl starch, per pound [1]	Corn oil (crude), per pound [2]	Gluten feed, per ton [3]	Total products in terms of corn, per bushel [4]		
	Cents	*Cents*	*Dollars*	*Cents*	*Cents*	*Cents*
1931—October	2.20	3.9	13.70	94.2	38.1	56.1
November	2.29	4.3	15.35	99.3	42.7	56.6
December	2.16	3.5	15.35	93.5	37.1	56.4
1932—January	2.11	3.4	13.90	90.4	37.0	53.4
February	2.10	3.5	11.60	88.2	34.2	54.0
March	2.10	3.5	11.60	88.2	33.2	55 0
April	2.10	3.2	12.40	88.4	32.5	55.9
May	2.02	2.9	12.50	85.3	31.4	53.9
June	2.00	2.9	12.40	84.5	30.2	54.3
July	2.00	3.3	10.65	83.6	31.9	51.7
August	2.00	4.0	11.90	85.9	31.9	54.0
September	2.00	4.5	13.05	87.7	30.0	57.7
October	1.97	4.2	12.00	85.2	25.7	59.5
November	1.82	3.2	10.70	77.3	24.9	52.4
December	1.75	2.9	11.05	74.7	23.0	51.7
1933—January	1.75	3.0	11.50	75.2	23.6	51.6
February	1.75	3.0	11.95	75.6	23.1	52.5
March	1.76	3.2	12.80	77.0	25.7	51.3
April	1.96	3.4	14.05	85.4	34.5	50.9
May	2.10	4.6	15.85	93.7	42.2	51.5
June	2.10	5.0	17.15	95.5	43.4	52.1
July	2.32	6.3	21.00	108.6	55.8	52.8
August	2.45	5.2	22.45	112.5	51.0	61.5
September	2.45	4.3	20.75	109.5	47.5	62.0
October	2.35	3.9	19.60	104.4	40.2	64.2
November	2.25	3.8	20.55	101.6	44.4	57.2
December	2.39	3.7	18.20	104.3	46.5	57.8
1934—January	2.39	3.7	17.80	103.9	49.7	54.2
February	3.39	4.6	18.45	106.0	48.6	57.4
March	2.39	4.8	19.70	107.4	48.9	58.5
April	2.39	4.8	19.45	107.2	47.3	59.9
May	2.39	4.7	17.90	105.7	51.3	54.4
June	2.51	4.7	20.60	112.1	58.4	53.7
July	2.71	5.2	21.25	120.4	64.1	56.3
August	3.09	6.0	25.70	138.7	76.1	62.6
September	3.14	6.9	28.20	144.1	80.0	64.1
October	3.04	7.7	28.65	142.3	77.9	64.4
November	3.05	8.5	30.10	145.3	83.4	61.9
December	3.14	9.4	34.10	153.3	93.3	60.0
1935—January	3.14	9.9	33.70	153.8	90.8	63.0
February	3.14	10.5	31.85	153.2	87.7	65.5
March	3.11	10.4	27.45	148.2	83.3	64.9
April	3.13	9.5	24.65	144.9	89.0	55.9
May	3.14	8.9	25.45	145.0	87.6	57.4
June	3.14	9.0	24.45	144.3	85.1	59.2
July	3.14	8.7	22.25	141.9	84.8	57.1
August	3.14	8.9	21.20	141.3	80.6	60.7
September	3.14	9.0	19.95	140.4	83.2	57.2
October	3.14	9.6	22.00	143.2	82.0	61.2
November	2.94	9.9	23.58	138.1	62.1	76.0
December	2.70	10.3	23.75	130.7	59.0	71.7
1936—January	2.65	9.6	22.14	126.4	60.9	65.5
February	2.59	8.9	20.08	121.4	61.3	60.1
March	2.65	8.1	18.40	120.7	60.8	59.9
April	2.68	8.2	16.45	120.2	63.2	57.0
May	2.75	8.1	16.70	122.6	63.2	59.4
June	2.75	8.0	17.90	123.5	64.0	59.5
July	2.98	8.9	28.20	141.9	85.8	56.1

[1] Compiled from data supplied by Corn Industries Research Foundation and Corn Products Refining Co.
[2] Compiled from National Provisioner on basis of crude oil, in tanks, f. o. b. mills. Monthly price is simple average of the weekly range of prices.
[3] Compiled from reports to the Bureau of Agricultural Economics. Monthly price is an average of 1 quotation a week (Tuesday).
[4] Weighted according to quantity produced per bushel of corn as follows: Pearl starch, 34.48 pounds; crude corn oil, 1.65 pounds; gluten feed (to represent all feed), 17.32 pounds.

Source: Bureau of Agricultural Economics.

TABLE 31.—*Corn: Supplies, sales, receipts, and grindings, 1926–27 to 1935–36*

Year beginning Oct. 1	Carry-over, farm and market, plus crop		Corn sold off farms		Receipts at 10 markets [1]		Wet-process grindings [2]			
	For all purposes	For grain	Total	Percentage of grain supply	Total	Percentage of grain supply	Total	As a percentage of—		
								Grain supply	Corn sold	Receipts at 10 markets
	1,000 bushels	*1,000 bushels*	*1,000 bushels*	*Percent*	*1,000 bushels*	*Percent*	*1,000 bushels*	*Percent*	*Percent*	*Percent*
1926–27	2,824,977	2,418,212	467,205	19.3	225,295	9.3	82,040	3.4	17.6	36.4
1927–28	2,833,402	2,435,471	519,295	21.3	296,184	12.2	88,091	3.6	17.0	29.7
1928–29	2,757,716	2,353,190	539,907	22.9	264,693	11.2	87,202	3.7	16.2	32.9
1929–30	2,669,372	2,283,378	461,471	20.2	236,409	10.4	79,958	3.5	17.3	33.8
1930–31	2,216,769	1,893,602	341,571	18.0	180,671	9.5	66,489	3.5	19.5	36.8
1931–32	2,741,039	2,395,655	439,383	18.3	128,434	5.4	62,463	2.6	14.2	48.6
1932–33	3,196,957	2,842,188	545,027	19.2	224,166	7.9	71,543	2.5	13.1	31.9
1933–34	2,782,588	2,486,355	400,742	16.1	201,282	8.1	70,540	2.8	17.6	35.0
1934–35	1,814,996	1,483,653	141,812	9.6	99,221	6.7	54,809	3.7	38.6	55.2
1935–36	2,356,705	2,065,737	382,108	18.5	183,350	8.9	72,951	3.5	19.1	39.8

[1] 10 markets: Chicago, Duluth, Indianapolis, Kansas City, Omaha, St. Louis, Milwaukee, Minneapolis, Peoria, and Detroit. Detroit was discontinued in June 1936.

[2] Compiled by the Corn Refiners' Statistical Bureau, Chicago, Ill.

Source: Bureau of Agricultural Economics.

TABLE 32.—*Wholesale value of certain dry-process corn products per bushel of corn, the price of corn, and the spread between them, New York, by months, October 1931 to July 1936*

Year and month	Wholesale value				Corn, No. 3 Yellow, market price per bushel	Spread between corn and products
	Corn meal, white, per pound	Corn flour, per pound	Hominy feed, per ton	Total products in terms of corn, per bushel [1]		
	Cents	*Cents*	*Dollars*	*Cents*	*Cents*	*Cents*
1931—October	1.62	1.62	19.55	73.20	54.38	18.82
November	1.81	1.81	24.58	84.48	59.50	24.98
December	1.62	1.64	24.09	77.76	51.59	26.17
1932—January	1.56	1.56	20.64	72.28	50.72	21.56
February	1.54	1.54	19.15	70.14	48.69	21.45
March	1.42	1.42	18.74	65.74	48.00	17.74
April	1.36	1.36	19.09	64.09	46.02	18.07
May	1.34	1.34	18.66	63.00	44.84	18.16
June	1.30	1.30	16.92	59.96	43.47	16.49
July	1.30	1.31	16.65	59.73	45.12	14.61
August	1.36	1.36	17.45	62.48	45.69	16.79
September	1.31	1.31	16.98	60.35	45.12	15.23
October	1.10	1.06	15.78	52.00	40.62	11.38
November	1.17	1.05	16.19	54.39	41.19	13.20
December	1.09	1.05	17.23	53.10	40.52	12.58
1933—January	1.10	1.05	16.85	53.01	40.25	12.76
February	1.07	1.05	16.92	52.21	39.47	12.74
March	1.15	1.05	17.33	54.94	41.54	13.40
April	1.42	1.12	17.65	63.38	48.58	14.80
May	1.66	1.46	19.88	74.00	59.00	15.00
June	1.64	1.64	21.00	75.30	57.97	17.33
July	1.81	1.84	25.15	85.17	71.88	13.29
August	1.74	1.78	27.12	84.83	64.81	20.02
September	1.68	1.78	24.60	80.60	62.62	17.98
October	1.60	1.68	21.31	74.61	55.19	19.42
November	1.90	1.88	21.75	84.61	61.16	23.45
December	1.93	1.94	22.25	86.23	62.15	24.08
1934—January	2.01	1.90	24.50	90.59	64.84	25.75
February	1.89	1.90	26.50	89.08	65.34	23.74
March	1.95	1.90	26.34	90.66	65.05	25.61
April	1.91	1.88	23.70	86.82	60.75	26.07
May	2.09	1.88	21.40	89.77	63.84	25.93
June	2.20	2.02	25.95	98.05	71.95	26.10
July	2.25	2.22	24.96	99.38	76.06	23.32
August	2.51	2.30	32.10	114.30	89.12	25.18
September	2.57	2.33	33.67	117.71	92.22	25.49
October	2.65	2.35	30.82	117.31	91.03	26.28
November	2.81	2.35	34.86	125.93	97.53	28.40
December	2.92	2.62	38.97	134.33	105.82	28.51
1935—January	2.82	2.65	37.54	130.15	103.72	26.43
February	2.81	2.65	34.10	126.47	102.16	24.31
March	2.63	2.61	32.10	119.11	97.75	21.36
April	2.80	2.61	32.04	123.98	104.50	19.48
May	2.72	2.75	33.94	124.14	103.12	21.02
June	2.69	2.54	32.22	120.67	98.08	22.59
July	2.64	2.61	28.98	116.33	101.59	14.74
August	2.58	2.63	29.15	114.84	98.12	16.72
September	2.64	2.60	29.72	117.01	101.00	16.01
October	2.82	2.55	30.32	122.61	107.69	14.92
November	2.45	2.47	27.36	108.62	82.35	26.27
December	2.30	2.16	26.72	102.31	74.62	27.69
1936—January	2.16	2.09	25.45	96.70	82.34	14.36
February	2.11	2.05	23.50	93.15	81.35	11.80
March	2.09	2.00	22.98	91.85	79.00	12.85
April	2.21	2.00	23.72	96.05	80.88	15.17
May	2.23	2.14	24.50	98.00	78.00	[2] 20.00
June	2.39	2.16	25.60	103.81	78.69	[2] 25.12
July	3.04	2.52	35.00	133.47	99.50	[2] 33.97

[1] Weights used: Corn meal, 29 pounds per bushel of corn; corn flour, 4.3; and hominy feed, 19.7 pounds.
[2] The sharp rise in the margin during May, June, and July is due largely to a greater increase in the price of hominy feed than in the price of corn.

Source: Bureau of Agricultural Economics; compiled from New York Journal of Commerce· monthly averages are averages of 1 quotation each week (Saturday).

TABLE 33.—*Wholesale price and Federal tax per gallon of grain alcohol, value of alcohol per bushel of corn, price of corn, and spread between corn and alcohol, New York, by months, October 1931 to July 1936*

Year and month	Grain alcohol 190° [1]				Corn, No. 3 Yellow, market price, per bushel	Spread per bushel between value of alcohol and price of corn
	Wholesale price, per gallon	Federal tax, per gallon	Price of alcohol less tax, per gallon	Value per bushel of corn		
1931—October	(2)	$2.09				
November	(2)	2.09				
December	$2.483	2.09	$0.393	$0.982	$0.516	$0.466
1932—January	2.495	2.09	.405	1.012	.507	.505
February	2.495	2.09	.405	1.012	.487	.525
March	2.495	2.09	.405	1.012	.480	.532
April	2.495	2.09	.405	1.012	.460	.552
May	2.495	2.09	.405	1.012	.448	.564
June	2.495	2.09	.405	1.012	.435	.577
July	2.495	2.09	.405	1.012	.401	.611
August	2.495	2.09	.405	1.012	.457	.555
September	2.495	2.09	.405	1.012	.451	.561
October	2.495	2.09	.405	1.012	.406	.606
November	2.495	2.09	.405	1.012	.412	.600
December	2.495	2.09	.405	1.012	.405	.607
1933—January	2.495	2.09	.405	1.012	.402	.610
February	2.495	2.09	.405	1.012	.395	.617
March	2.495	2.09	.405	1.012	.415	.597
April	2.495	2.09	.405	1.012	.486	.526
May	2.495	2.09	.405	1.012	.590	.422
June	2.495	2.09	.405	1.012	.580	.432
July	2.495	2.09	.405	1.012	.719	.293
August	2.495	2.09	.405	1.012	.648	.364
September	2.495	2.09	.405	1.012	.626	.386
October	2.495	2.09	.405	1.012	.552	.460
November	2.495	2.09	.405	1.012	.612	.400
December	2.495	2.09	.405	1.012	.622	.390
1934—January					.648	
February	4.355	3.80	.555	1.388	.653	.735
March	4.355	3.80	.555	1.388	.650	.738
April	4.355	3.80	.555	1.388	.608	.780
May	4.355	3.80	.555	1.388	.638	.750
June	4.355	3.80	.555	1.388	.720	.668
July	4.355	3.80	.555	1.388	.761	.627
August	4.355	3.80	.555	1.388	.891	.497
September	4.355	3.80	.555	1.388	.922	.466
October	4.355	3.80	.555	1.388	.910	.478
November	4.355	3.80	.555	1.388	.975	.413
December	4.355	3.80	.555	1.388	1.058	.330
1935—January	4.355	3.80	.555	1.388	1.037	.351
February	4.355	3.80	.555	1.388	1.022	.366
March	4.356	3.80	.556	1.390	.978	.412
April	4.510	3.80	.710	1.775	1.045	.730
May	4.560	3.80	.760	1.900	1.031	.869
June	4.560	3.80	.760	1.900	.981	.919
July	4.560	3.80	.760	1.900	1.012	.888
August	4.560	3.80	.760	1.900	.981	.919
September	4.560	3.80	.760	1.900	1.010	.890
October	4.560	3.80	.760	1.900	1.077	.823
November	4.560	3.80	.760	1.900	.824	1.076
December	4.560	3.80	.760	1.900	.746	1.154
1936—January	4.553	3.80	.753	1.882	.823	1.059
February	4.530	3.80	.730	1.825	.814	1.011
March	4.530	3.80	.730	1.825	.790	1.035
April	4.530	3.80	.730	1.825	.809	1.016
May	4.530	3.80	.730	1.825	.780	1.450
June	4.530	3.80	.730	1.825	.787	1.038
July	4.455	3.80	.655	1.638	.995	.643

[1] Assumed outturn of 2.5 gallons per bushel of corn.
[2] Figures unavailable.

Source: Bureau of Agricultural Economics; alcohol prices compiled from records of the Bureau of Labor Statistics, Department of Commerce; corn prices obtained from New York Journal of Commerce; monthly average consists of an average of 1 price each week (Saturday).

TABLE 34.—*Wholesale value of milled rice products, price of rough rice, and spread between them, per barrel, Southern States,*[1] *by months, April 1933 to July 1936*

Year and month	Value of milled rice products per barrel [2]	Farm price rough rice per barrel [3]	Spread	Year and month	Value of milled rice products per barrel [2]	Farm price rough rice per barrel [3]	Spread
1933	*Cents*	*Cents*	*Cents*	1935	*Cents*	*Cents*	*Cents*
April	([4])	151.2	----------	January	365.9	277.2	88.7
May	([4])	201.6	----------	February	362.1	295.2	66.9
June	299.2	201.6	97.6	March	388.2	306.0	82.2
July	307.4	219.6	87.8	April	403.8	309.6	94.2
August	341.9	223.2	118.7	May	424.7	313.2	111.5
September	367.8	244.8	123.0	June	440.0	324.0	116.0
October	397.6	277.2	120.4	July	444.9	316.8	128.1
November	402.0	273.6	128.4	August	435.2	266.4	168.8
December	408.7	270.0	138.7	September	438.5	172.8	265.7
				October	450.4	198.0	252.4
1934				November	479.2	234.0	245.2
January	411.3	273.6	137.7	December	498.9	259.2	239.7
February	410.2	284.4	125.8				
March	411.2	284.4	126.8	1936			
April	411.8	284.4	127.4	January	427.6	298.8	128.8
May	412.0	277.2	134.8	February	400.9	306.0	94.9
June	413.2	277.2	136.0	March	410.7	298.8	111.9
July	405.2	270.0	135.2	April	453.2	302.4	150.8
August	396.4	284.4	112.0	May	467.5	320.4	147.1
September	393.2	252.0	141.2	June	459.5	320.4	139.1
October	389.8	277.2	112.6	July	455.4	324.0	131.4
November	378.4	295.2	83.2				
December	380.2	280.8	99.4				

[1] Including Texas, Arkansas, and Louisiana.
[2] Products included and weights: Fancy Blue Rose, 97 pounds per barrel of rough rice; screenings, 10 pounds; brewers' rice, 4 pounds; all at New Orleans. Prices obtained from reports to the Bureau of Agricultural Economics.
[3] Farm price per barrel for Louisiana, 162 pounds rough rice.
[4] Figures unavailable.

Source: Bureau of Agricultural Economics.

TABLE 35.—*Wholesale value of milled rice products, price of rough rice, and spread between them, per 100 pounds, California, by weeks, April 1933 to July 1936*

Year and day	Value of milled products per 100 pounds [1]	No. 1 paddy rough rice, per 100 pounds [2]	Spread	Year and day	Value of milled products per 100 pounds [1]	No. 1 paddy rough rice, per 100 pounds [2]	Spread
1933	*Cents*	*Cents*	*Cents*		*Cents*	*Cents*	*Cents*
Apr. 3	139.5	105.0	34.5	Aug. 21	208.0	172.0	36.0
Apr. 10	139.5	105.0	34.5	Aug. 28	205.0	172.0	33.0
Apr. 17	139.5	105.0	34.5	Sept. 4	205.0	172.0	33.0
Apr. 24	146.0	115.0	31.0	Sept. 11	204.0	172.0	32.0
May 1	----------	145.0	----------	Sept. 18	204.0	172.0	32.0
May 8	----------	145.0	----------	Sept. 25	206.0	175.0	31.0
May 15	----------	165.0	----------	Oct. 2	219.0	170.0	49.0
May 22	----------	172.0	----------	Oct. 9	219.0	170.0	49.0
May 29	----------	----------	----------	Oct. 16	219.0	170.0	49.0
June 5	199.0	172.0	27.0	Oct. 23	230.5	[3] 170.0	60.5
June 12	199.0	172.0	27.0	Oct. 30	230.5	[3] 170.0	60.5
June 19	199.0	170.0	29.0	Nov. 6	230.5	[3] 170.0	60.5
June 26	199.0	170.0	29.0	Nov. 13	230.5	[3] 170.0	60.5
July 3	208.0	172.0	36.0	Nov. 20	230.5	[3] 170.0	60.5
July 10	208.0	172.0	36.0	Nov. 27	230.5	[3] 170.0	60.5
July 17	211.5	172.0	39.5	Dec. 3	230.5	[3] 170.0	60.5
July 24	208.0	172.0	36.0	Dec. 10	230.5	[3] 170.0	60.5
July 31	208.0	172.0	36.0	Dec. 17	230.5	[3] 170.0	60.5
Aug. 7	208.0	172.0	36.0	Dec. 24	230.5	[3] 175.0	55.5
Aug. 14	208.0	172.0	36.0	Dec. 31	230.5	[3] 175.0	55.5

[1] Products included: Fancy California-Japan head rice, screenings, and brewers' rice, San Francisco. Milled from 100 pounds of No. 1 Paddy.
[2] No. 1 Paddy yielding 50 pounds of head rice, f. o. b. interior growing points.
[3] Quotation on basis of 54-pound yield converted to 50-pound basis by deducting 5 cents per 100 pounds.

TABLE 35.—*Wholesale value of milled rice products, price of rough rice, and spread between them, per 100 pounds, California, by weeks, April 1933 to July 1936*—Continued

Year and day	Value of milled products per 100 pounds [1]	No. 1 paddy rough rice, per 100 pounds [2]	Spread	Year and day	Value of milled products per 100 pounds [1]	No. 1 paddy rough rice, per 100 pounds [2]	Spread
1934	*Cents*	*Cents*	*Cents*	1935	*Cents*	*Cents*	*Cents*
Jan. 8	230.9	[3] 175.0	55.9	Apr. 29	246.5	[5] 189.5	57.0
Jan. 15	230.9	[3] 175.0	55.9	May 6	253.0	[5] 196.5	56.5
Jan. 22	230.9	[3] 175.0	55.9	May 13	253.0	[5] 196.5	56.5
Jan. 29	230.9	[3] 175.0	55.9	May 20	253.0	[5] 196.5	56.5
Feb. 5	230.9	[3] 175.0	55.9	May 27	253.0	[5] 196.5	56.5
Feb. 12	230.9	[3] 175.0	55.9	June 3	253.0	[5] 196.5	56.5
Feb. 19	230.9	[3] 175.0	55.9	June 10	253.0	[5] 196.5	56.5
Feb. 26	232.9	[3] 175.0	57.9	June 17	253.0	[5] 196.5	56.5
Mar. 5	233.0	175.0	58.0	June 24	253.0	[5] 196.5	56.5
Mar. 12	233.0	175.0	58.0	July 1	253.0	[5] 196.5	56.5
Mar. 19	233.0	175.0	58.0	July 8	253.0	[5] 196.5	56.5
Mar. 26	233.0	175.0	58.0	July 15	253.0	[5] 196.5	56.5
Apr. 2	233.0	175.0	58.0	July 22	253.0	[5] 196.5	56.5
Apr. 9	233.0	175.0	58.0	July 29	253.0	[5] 196.5	56.5
Apr. 16	233.0	175.0	58.0	Aug. 5	253.0	[5] 196.5	56.5
Apr. 23	233.0	175.0	58.0	Aug. 12	253.0	[5] 196.5	56.5
Apr. 30	233.0	175.0	58.0	Aug. 19	253.0	----------	----------
May 7	233.0	175.0	58.0	Aug. 26	253.0	----------	----------
May 14	233.0	175.0	58.0	Sept. 2	258.5	----------	----------
May 21	233.0	175.0	58.0	Sept. 9	258.5	----------	----------
May 28	233.0	175.0	58.0	Sept. 16	263.5	----------	----------
June 4	233.0	175.0	58.0	Sept. 23	273.5	108.0	165.5
June 11	233.0	175.0	58.0	Sept. 30	273.5	108.0	165.5
June 18	233.0	175.0	58.0	Oct. 7	273.5	108.0	165.5
June 25	233.0	175.0	58.0	Oct. 14	273.5	108.0	165.5
July 9	233.0	175.0	58.0	Oct. 21	288.0	120.0	168.0
July 16	233.0	175.0	58.0	Oct. 28	288.0	120.0	168.0
July 23	233.0	175.0	58.0	Nov. 4	288.0	120.0	168.0
July 30	233.0	175.0	58.0	Nov. 11	288.0	120.0	168.0
Aug. 6	233.0	175.0	58.0	Nov. 18	288.0	120.0	168.0
Aug. 13	233.0	175.0	58.0	Nov. 25	288.0	120.0	168.0
Aug. 20	233.0	175.0	58.0	Dec. 2	288.0	120.0	168.0
Aug. 27	233.0	175.0	58.0	Dec. 9	288.0	120.0	168.0
Sept. 3	233.0	175.0	58.0	Dec. 16	288.0	120.0	168.0
Sept. 10	233.0	175.0	58.0	Dec. 23	288.0	120.0	168.0
Sept. 17	233.0	175.0	58.0	Dec. 30	288.0	120.0	168.0
Sept. 24	233.0	175.0	58.0				
Oct. 1	233.0	175.0	58.0	1936			
Oct. 8	233.0	175.0	58.0	Jan. 6	277.0	128.0	149.0
Oct. 15	233.0	175.0	58.0	Jan. 13	277.0	197.0	80.0
Oct. 22	233.0	166.0	67.0	Jan. 20	277.0	197.0	80.0
Oct. 29	233.0	166.0	67.0	Jan. 27	277.0	197.0	80.0
Nov. 5	233.0	166.0	67.0	Feb. 3	282.0	202.0	80.0
Nov. 12	233.0	166.0	67.0	Feb. 10	282.0	202.0	80.0
Nov. 19	233.0	166.0	67.0	Feb. 17	282.0	202.0	80.0
Nov. 26	233.0	166.0	67.0	Feb. 24	282.0	202.0	80.0
Dec. 3	233.0	166.0	67.0	Mar. 2	282.0	202.0	80.0
Dec. 10	233.0	166.0	67.0	Mar. 9	282.0	202.0	80.0
Dec. 17	233.0	166.0	67.0	Mar. 16	282.0	202.0	80.0
Dec. 24	[4]	[4]	[4]	Mar. 23	282.0	202.0	80.0
Dec. 31	[4]	[4]	[4]	Mar. 30	282.0	202.0	80.0
				Apr. 6	282.0	202.0	80.0
1935				Apr. 13	282.0	202.0	80.0
Jan. 7	233.0	166.0	67.0	Apr. 20	282.0	202.0	80.0
Jan. 14	233.0	166.0	67.0	Apr. 28	282.0	202.0	80.0
Jan. 21	233.0	166.0	67.0	May 4	282.0	202.0	80.0
Jan. 28	233.0	166.0	67.0	May 11	282.0	202.0	80.0
Feb. 4	233.0	166.0	67.0	May 18	282.0	202.0	80.0
Feb. 11	233.0	166.0	67.0	May 25	289.5	202.0	87.5
Feb. 18	233.0	166.0	67.0	June 1	289.5	202.0	87.5
Feb. 25	233.0	166.0	67.0	June 8	289.5	202.0	87.5
Mar. 4	233.0	166.0	67.0	June 15	289.5	202.0	87.5
Mar. 11	233.0	166.0	67.0	June 22	289.5	202.0	87.5
Mar. 18	233.0	166.0	67.0	June 29	289.5	202.0	87.5
Mar. 25	233.0	166.0	67.0	July 6	289.5	202.0	87.5
Apr. 1	233.0	166.0	67.0	July 13	289.5	202.0	87.5
Apr. 8	233.0	175.0	58.0	July 20	289.5	202.0	87.5
Apr. 15	246.5	182.0	64.5	July 27	289.5	202.0	87.5
Apr. 22	246.5	[5] 186.0	60.5				

[3] Quotation on basis of 54-pound yield converted to 50-pound basis by deducting 5 cents per 100 pounds.
[4] Holidays—no reports.
[5] Quotation on basis of 48-pound yield converted to 50-pound basis by adding 2½ cents per 100 pounds.

Source: Bureau of Agricultural Economics.

TABLE 36.—*Rice: Wholesale price at New Orleans and New York, and retail price at New York, by months, January 1932 to July 1936*

Year and month	Wholesale price per pound, fancy blue rose		Retail price per pound, New York	Year and month	Wholesale price per pound, fancy blue rose		Retail price per pound, New York
	New Orleans	New York			New Orleans	New York	
1932	*Cents*	*Cents*	*Cents*	1934	*Cents*	*Cents*	*Cents*
January	2.84	3.22	7.7	May	3.90	4.20	7.5
February	2.62	2.75	7.4	June	3.94	4.20	8.4
March	2.47	2.66	7.0	July	3.88	4.20	8.1
April	2.22	2.62	6.6	August	3.74	4.20	8.2
May	2.12	2.50	6.2	September	3.69	4.12	8.6
June	2.14	2.50	6.2	October	3.68	4.05	8.5
July	1.95	2.25	6.3	November	3.55	4.05	8.4
August	2.14	2.36	6.3	December	3.57	4.05	8.5
September	2.26	2.46	6.2	1935			
October	2.08	2.50	6.3				
November	2.00	2.50	6.1	January	3.42	3.94	8.8
December	1.95	2.50	5.7	February	3.38	3.75	8.8
1933				March	3.64	3.94	8.8
				April	3.76	4.10	8.8
				May	3.95	4.25	8.8
January	1.89	2.42	5.5	June	4.08	4.32	8.7
February	1.80	2.38	5.6	July	4.16	4.38	8.9
March	1.96	2.47	5.4	August	4.07	4.28	8.8
April	2.14	2.44	5.3	September	4.10	4.25	8.9
May	2.65	2.84	5.4	October	4.28	4.38	8.9
June	2.79	2.91	5.5	November	4.52	4.81	8.8
July	2.89	----------	5.6	December	4.70	4.88	8.8
August	3.19	----------	5.8				
September	3.37	----------	6.4	1936			
October	3.75	4.12	7.1				
November	3.80	4.16	7.1	January	4.00	4.31	8.9
December	3.86	4.25	7.0	February	3.74	4.12	8.8
1934				March	3.86	4.22	8.7
				April	4.28	4.47	8.8
				May	4.43	4.58	8.9
January	3.90	4.25	7.3	June	4.34	4.64	8.9
February	3.90	4.25	7.3	July	4.38	4.65	8.9
March	3.90	4.22	7.4				
April	3.90	4.20	7.5				

Source: Bureau of Agricultural Economics. Retail prices compiled from Bureau of Labor Statistics.

TABLE 37.—*Rice: Factors affecting retail prices, 1921–35*

Year beginning August	Retail prices per pound, at 51 markets	United States carry-over, Aug. 1, plus crop	Index numbers of income of industrial workers (1924–29=100)	Year beginning August	Retail prices per pound, at 51 markets	United States carry-over, Aug. 1, plus crop	Index numbers of income of industrial workers (1924–29=100)
	Cents	*1,000 barrels*			*Cents*	*1,000 barrels*	
1921–22	9.3	12,774	77	1929–30	9.6	12,153	98
1922–23	9.5	12,475	97	1930–31	8.9	13,282	74
1923–24	9.7	10,598	98	1931–32	7.3	13,558	53
1924–25	10.7	9,533	95	1932–33	6.1	13,622	42
1925–26	11.5	9,249	101	1933–34	7.4	11,877	57
1926–27	11.1	12,401	102	1934–35	8.2	12,210	61
1927–28	10.2	13,489	98	1935–36	8.5	11,290	71
1928–29	9.8	13,774	104				

Source: Bureau of Agricultural Economics. Retail price compiled from Bureau of Labor Statistics.

TABLE 38.—*Peanuts, Virginia type: Price and price spread, per pound, by months, November 1932 to July 1936*

Season	Virginia type					
	F. o. b. cleaned fancy	Growers' price converted to cleaned basis	Spread	F. o b. shelled no. 1	Growers' price converted to shelled basis	Spread
1932–33	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*
November	3.25	1.70	1.55	3.00	2.43	.57
December	3.00	1.05	1.95	2.38	1.50	.88
January	3.00	1.05	1.95	2.38	1.50	.88
February	2.75	1.05	1.70	2.38	1.50	.88
March	2.75	1.05	1.70	2.62	1.50	1.12
April	2.75	1.18	1.57	2.88	1.68	1.20
May	3.25	1.70	1.55	3.88	2.43	1.45
June	3.25	1.84	1.41	4.12	2.62	1.50
July	3.62	2.75	.87	4.88	3.93	.95
August	4.12	2.62	1.50	5.25	3.75	1.50
September	4.00	2.62	1.38	5.00	3.75	1.25
October	3.88	2.36	1.52	4.75	3.38	1.37
Average	3.30	1.75	1.55	3.63	2.50	1.13
1933–34						
November	4.00	2.62	1.38	4.88	3.75	1.13
December	4.00	2.75	1.25	4.88	3.93	.95
January	4.25	3.02	1.23	5.12	4.32	.80
February	4.38	3.15	1.23	5.12	4.50	.62
March	4.50	3.41	1.09	5.50	4.88	.62
April	4.62	3.41	1.21	5.62	4.88	.74
May	4.50	3.41	1.09	5.50	4.88	.62
June	4.50	3.41	1.09	5.50	4.88	.62
July	4.38	3.41	.97	5.50	4.88	.62
August	4.62	3.55	1.07	5.75	5.07	.68
September	5.50	3.80	1.70	6.50	5.43	1.07
Average	4.48	3.27	1.21	5.44	4.67	.77
1934–35						
October	6.75	3.15	3.60	7.38	4.50	2.88
November	5.75	3.15	2.60	6.75	4.50	2.25
December	6.00	3.41	2.59	7.12	4.88	2.24
January	6.50	3.80	2.70	8.12	5.43	2.69
February	6.75	4.20	2.55	9.25	6.00	3.25
March	6.88	4.46	2.42	9.38	6.38	3.00
April	6.62	4.20	2.42	9.12	6.00	3.12
May	6.50	3.94	2.56	8.88	5.62	3.26
June	6.38	3.68	2.70	8.38	5.25	3.13
July	6.12	3.68	2.44	8.00	5.25	2.75
August	6.00	3.80	2.20	7.38	5.43	1.95
September	6.62	3.68	2.94	7.88	5.25	2.63
October	6.25	3.15	3.10	7.38	4.50	2.88
November	6.00	3.15	2.85	6.88	4.50	2.38
December	5.88	2.89	2.99	6.38	4.12	2.26
Average 15 months	6.33	3.62	2.71	7.89	5.17	2.71
1936						
January	5.88	2.89	2.99	5.25	4.12	1.13
February	4.88	2.89	1.99	5.12	4.12	1.00
March	4.62	2.89	1.73	5.12	4.12	1.00
April	4.75	2.89	1.86	5.38	4.12	1.26
May	4.88	2.89	1.99	5.38	4.12	1.26
June	6.00	3.68	2.32	5.88	5.25	.63
July	6.75	4.33	2.42	7.00	6.18	.82
Average 6 months, February to July	5.31	3.26	2.05	5.65	4.65	1.00

Source: Bureau of Agricultural Economics. Prices based on returns from cleaners, shellers, and brokers. To convert the price paid to growers to cleaned basis multiply by 1.05; to convert to shelled basis multilpy by 1.50.

TABLE 39.—*Peanuts: Price and price spread, per pound, by months, November 1932 to July 1936*

Season	Southeastern						Southwestern		
	Runners			Spanish			Spanish		
	F. o. b. shelled	Growers' price converted to shelled basis	Spread	F. o. b. shelled	Growers' price converted to shelled basis	Spread	F. o. b. shelled	Growers' price converted to shelled basis	Spread
1932-33	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*
November	2.12	1.20	0.92	2.38	1.65	0.73	2.38	1.35	1.03
December	2.00	.90	1.10	2.25	1.35	.90	2.12	1.05	1.07
January	2.38	1.35	1.03	2.38	1.65	.73	2.38	1.35	1.03
February	2.12	1.35	.77	2.25	1.65	.60	2.38	1.65	.73
March	2.50	1.50	1.00	2.62	1.80	.82	3.00	1.95	1.05
April	2.75	1.65	1.10	2.88	2.10	.78	3.38	2.10	1.28
May	3.88	2.40	1.48	3.88	3.15	.73	--------	----------	--------
June	4.12	2.70	1.52	4.25	3.60	.65	--------	----------	--------
July	----------	----------	--------	4.75	4.05	.70	5.00	3.75	1.25
August	----------	----------	--------	5.00	4.05	.95	5.12	3.60	1.52
September	----------	----------	--------	4.50	3.30	1.20	4.88	3.75	1.13
October	4.25	3.15	1.10	4.50	3.60	.90	4.62	3.45	1.17
Average, 12 months	2.90	1.80	1.10	3.47	2.66	.81	3.53	2.40	1.13
1933-34									
November	4.38	3.15	1.23	4.62	3.75	.87	4.62	3.30	1.32
December	4.38	3.15	1.23	4.75	3.75	1.00	4.62	3.30	1.32
January	4.62	3.60	1.02	5.00	4.20	.80	5.00	3.90	1.10
February	4.75	3.75	1.00	5.12	4.05	1.07	5.25	4.05	1.20
March	5.12	3.90	1.22	5.38	4.20	1.18	5.38	4.05	1.33
April	5.00	3.75	1.25	5.12	3.90	1.22	5.25	4.05	1.20
May	5.00	3.75	1.25	5.00	3.90	1.10	5.12	4.05	1.07
June	4.88	3.75	1.13	5.00	4.05	.95	--------	----------	--------
July	4.88	3.75	1.13	4.88	4.05	.83	--------	----------	--------
August	5.12	3.75	1.37	5.00	4.05	.95	5.25	4.20	1.05
September	----------	----------	--------	5.50	4.20	1.30	6.00	4.50	1.50
Average, 11 months	4.81	3.63	1.18	5.03	4.01	1.02	5.17	3.93	1.24
1934-35									
October	6.12	3.60	2.52	6.25	4.05	2.20	6.50	4.20	2.30
November	6.38	3.75	2.63	6.62	4.50	2.12	6.88	4.20	2.68
December	7.00	4.50	2.50	7.25	5.10	2.15	7.62	4.65	2.97
January	7.88	4.95	2.93	8.38	6.00	2.38	8.38	5.25	3.13
February	9.00	6.30	2.70	9.50	7.50	2.00	9.62	5.85	3.77
March	9.00	6.00	3.00	9.88	7.95	1.93	10.12	6.45	3.67
April	----------	----------	--------	9.50	7.05	2.45	--------	----------	--------
May	----------	----------	--------	9.12	6.90	2.22	--------	----------	--------
June	8.12	5.70	2.42	8.12	6.00	2.12	--------	----------	--------
July	----------	----------	--------	7.88	5.10	2.78	8.50	5.25	3.25
August	----------	----------	--------	----------	----------	----------	7.25	4.35	2.90
September	6.50	3.75	2.75	7.00	4.65	2.35	7.25	4.35	2.90
October	6.12	3.75	2.37	6.38	4.35	2.03	6.50	4.35	2.15
November	5.88	3.75	2.13	6.25	4.35	1.90	6.75	4.35	2.40
December	5.88	3.75	2.13	6.25	4.35	1.90	6.38	3.45	2.93
Average, 15 months	7.08	4.53	2.55	7.74	5.56	2.18	7.65	4.72	2.93
1936									
January	4.75	3.75	1.00	5.00	4.05	.95	5.00	3.30	1.70
February	4.62	3.75	.87	5.00	4.05	.95	5.12	3.75	1.37
March	4.62	3.60	1.02	4.88	4.20	.68	5.00	3.75	1.25
April	4.88	3.75	1.13	5.12	4.35	.77	5.50	4.65	.85
May	5.00	3.90	1.10	5.12	4.50	.62	--------	----------	--------
June	5.00	3.75	1.25	5.25	4.50	.75	--------	----------	--------
July	6.25	4.80	1.45	6.25	5.40	.85	--------	----------	--------
Average 6 months, February-July	5.06	3.92	1.14	5.27	4.50	.77	5.21	4.05	1.16

Source: Bureau of Agricultural Economics. Prices based on returns from cleaners, shellers, and brokers. To convert the price paid growers to cleaned basis multiply by 1.05; to convert to shelled basis multiply by 1.50.

TABLE 40.—*Peanut butter: Prices and price spread per pound, by months, November 1932 to July 1936*

Season	Prices			Price spread	
	Peanut butter		F. o. b. shelled peanuts converted to peanut butter basis	Retail over wholesale	Wholesale over f. o. b.
	Retail	Wholesale			
1932–33	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*
November		6.40	3.09		3.31
December		5.60	2.62		2.98
January		5.50	2.74		2.76
February		5.50	2.69		2.81
March		5.50	3.13		2.37
April		5.50	3.45		2.05
May		6.30	4.50		1.80
June		7.70	4.77		2.93
July		7.90	5.61		2.29
August		8.30	5.93		2.37
September		8.40	5.57		2.83
October		8.20	5.36		2.84
Average, 12 months		6.73	4.12		2.61
1933–34					
November	(16.30)	7.90	5.46	8.40	2.44
December	(16.30)	7.90	5.50	8.40	2.40
January	16.30	7.90	5.82	8.40	2.08
February	16.20	8.40	5.92	7.80	2.48
March	16.30	9.40	6.26	6.90	3.14
April	16.40	9.40	6.21	7.00	3.19
May	16.50	9.40	6.07	7.10	3.33
June	16.60	9.40	6.14	7.20	3.26
July	16.70	9.40	6.12	7.30	3.28
August	16.80	9.40	6.26	7.40	3.14
September	16.90	9.40	6.93	7.50	2.47
Average, 11 months	16.48	8.90	6.06	7.58	2.84
1934–35					
October	17.00	10.40	7.91	6.60	2.49
November	17.60	10.40	7.76	7.20	2.64
December	17.90	10.40	8.37	7.50	2.03
January	18.20	11.60	9.49	6.60	2.11
February	19.20	12.90	10.81	6.30	2.09
March	20.10	13.10	11.14	7.00	1.96
April	21.00	13.30	10.88	7.70	2.42
May	21.80	13.40	10.60	8.40	2.80
June	22.30	13.40	9.89	8.90	3.51
July	22.30	13.20	9.32	9.10	3.88
August	22.30	12.40	8.37	9.90	4.03
September	22.20	11.90	8.62	10.30	3.28
October	22.10	11.90	7.95	10.20	3.95
November	21.90	11.90	7.69	10.00	4.21
December	21.50	10.80	7.30	10.70	3.50
Average, 15 months	20.50	12.07	9.07	8.43	3.00
1936					
January	22.20	9.60	5.89	12.60	3.71
February	20.20	8.90	5.85	11.30	3.05
March	19.50	8.90	5.78	10.60	3.12
April	19.00	8.70	6.14	10.30	2.56
May	18.70	8.40	6.04	10.30	2.36
June	18.50	8.60	6.39	9.90	2.21
July	18.60	8.90	7.61	9.70	1.29
Average, 6 months, February to July	19.10	8.73	6.30	10.37	2.43

Source: Bureau of Agricultural Economics. Retail and wholesale prices from Bureau of Labor Statistics. F. o. b. and growers' prices are an average of Spanish and Virginia-type peanuts. To convert f. o. b. shelled peanut prices to peanut butter basis, multiply by 1.15 and to convert grower prices multiply by 1.73.

TABLE 41.—*Sugar: Prices and apparent price spread, June 1932 to July 1936*

Year and month	Refined sugar		New York wholesale price per pound of raw sugar, duty paid, converted to refined basis	Retail-wholesale spread per pound	Refiners' spread per pound
	United States average retail price per pound	New York wholesale price per pound (including tax)			
	Cents	*Cents*	*Cents*	*Cents*	*Cents*
1932—June	4.900	3.726	2.941	1.174	.785
July	5.000	3.945	3.258	1.055	.687
August	5.100	4.090	3.364	1.010	.726
September	5.100	4.165	3.354	.935	.811
October	5.100	4.122	3.352	.978	.770
November	5.100	4.152	3.276	.948	.876
December	5.100	4.067	3.037	1.033	1.030
1933—January	5.100	3.861	2.907	1.239	.954
February	5.000	3.822	2.933	1.178	.889
March	5.000	4.007	3.171	.993	.836
April	5.100	4.214	3.335	.886	.879
May	5.300	4.410	3.538	.890	.872
June	5.400	4.486	3.629	.914	.857
July	5.500	4.567	3.789	.933	.778
August	5.600	4.606	3.719	.994	.887
September	5.700	4.572	3.853	1.128	.719
October	5.700	4.508	3.579	1.192	.929
November	5.600	4.435	3.444	1.165	.991
December	5.500	4.304	3.440	1.196	.864
1934—January	5.400	4.214	3.422	1.186	.792
February	5.600	4.339	3.563	1.261	.776
March	5.400	4.410	3.328	.990	1.082
April	5.500	4.324	2.977	1.176	1.347
May	5.400	4.101	2.976	1.299	1.125
June	5.400	4.432	3.159	.968	1.273
July	5.700	4.655	3.387	1.045	1.268
August	5.700	4.655	3.470	1.045	1.185
September	5.700	4.655	3.078	1.045	1.577
October	5.700	4.561	3.104	1.139	1.457
November	5.600	4.447	3.146	1.153	1.301
December	5.500	4.285	3.159	1.215	1.126
1935—January	5.400	4.214	2.991	1.186	1.223
February	5.400	4.212	3.094	1.188	1.118
March	5.400	4.297	3.245	1.103	1.052
April	5.500	4.871	3.463	.629	1.408
May	5.700	5.145	3.511	.555	1.634
June	5.700	5.145	3.558	.555	1.587
July	5.800	5.051	3.476	.749	1.575
August	5.800	4.998	3.525	.802	1.473
September	5.800	5.057	3.744	.743	1.313
October	5.800	5.194	3.872	.606	1.322
November	5.900	5.160	3.662	.740	1.498
December	5.800	4.873	3.344	.927	1.529
1936—January	5.700	4.668	3.500	1.032	1.168
February	5.600	4.557	3.580	1.043	.977
March	5.500	4.646	3.792	.854	.854
April	5.500	4.900	4.012	.600	.888
May	5.600	4.900	3.981	.700	.919
June	5.600	4.900	4.009	.700	.891
July	5.700	4.730	3.959	.970	.771
Average, 2 years before and 6 months following the tax (June 1932 to May 1934, and February to July 1936)	5.357	4.336	3.451	1.021	.885
Average, tax period (June 1934 to December 1935)	5.647	4.732	3.368	.915	1.364

Compiled as follows: Retail prices from Bureau of Labor Statistics retail price bulletins. Wholesale prices from Lamborn Sugar Market Report, (raw converted to refined basis by multiplying by 1.07).

NOTE.—The quotations for raw sugar for November and December 1934 are open to question on several counts, and should not be considered as fully representative of the current price of raw sugar at the time. (See S. Doc. No. 44, 74th Cong., 1st sess., "Corner in December Sugar Futures", March 1935). However, the indicated discrepancies do not materially affect the conclusions to be drawn from the data.

Source: Bureau of Agricultural Economics.

TABLE 42.—*Louisiana sugarcane millers' estimated spread per pound of raw sugar, and data used in estimating this spread, 1932–36*

Crop year	Value per ton of Louisiana sugarcane for sugar	Sugar recovered per ton of cane, raw value	Season average price per pound of raw sugar [1]	Value of sugar recovered per ton of cane ground	Manufacturers' spread per ton of cane ground	Manufacturers' spread per pound of raw sugar
Period before and after the tax:	*Dollars*	*Pounds*	*Cents*	*Dollars*	*Dollars*	*Cents*
1932	3.06	155.7	2.95	4.59	1.53	.98
1933	3.29	158.1	3.23	5.11	1.82	1.15
1936 [2]	[3] 3.25	[4] 163.0	3.29	5.36	2.11	1.29
Average [5]	3.19	158.1	3.13	4.95	1.76	1.11
Tax period:						
1934	2.33	155.6	2.82	4.39	2.06	1.32
1935	[3] 3.19	[4] 163.0	3.18	5.18	1.99	1.22
Average [6]	2.62	158.1	2.94	4.65	2.04	1.29

[1] The Louisiana marketing period is usually considered to run from the middle of October to March 1. Byproducts are disregarded in the analysis.

[2] 1935 crop year.

[3] Estimated on the basis of the purchase agreement generally used.

[4] Preliminary.

[5] It is assumed that approximately one-half of the marketing of sugar from the 1935 crop was accomplished in 1936. Data for 1932 and 1933 are given twice the weight of the 1936 data. Louisiana raw sugar is sold in from 4 to 6 months.

[6] It is assumed that approximately one-half the sugar from the 1935 crop was marketed in 1935; 1934 is given twice the weight of 1935.

Source: Agricultural Adjustment Administration.

TABLE 43.—*Beet sugar: Estimated net returns to manufacturers, price paid farmers, and manufacturers' spread, June 1932 to July 1936*

Year and month	Estimated net return per pound from sale of beet sugar (after deducting taxes and sales expenses) [1]	Estimated manufacturers' spread per pound excluding tax [2]	Estimated price per pound paid farmers [3]
1932	*Cents*	*Cents*	*Cents*
June	3.095	1.263	1.832
July	3.314	1.352	1.962
August	3.459	1.411	2.048
September	3.534	1.442	2.092
October	3.557	1.858	1.699
November	3.587	1.874	1.713
December	3.502	1.829	1.673
1933			
January	3.311	1.730	1.581
February	3.257	1.701	1.556
March	3.439	1.797	1.642
April	3.646	1.905	1.741
May	3.845	2.009	1.836
June	3.920	2.048	1.872
July	4.000	2.090	1.910
August	4.041	2.111	1.930
September	4.008	2.094	1.914
October	3.862	2.013	1.849
November	3.787	1.974	1.813
December	3.647	1.901	1.746
1934			
January	3.568	1.860	1.708
February	3.693	1.925	1.768
March	3.764	1.962	1.802
April	3.678	1.917	1.761
May	3.458	1.803	1.655
1936			
February	3.947	2.072	1.875
March	4.073	2.138	1.935
April	4.290	2.252	2.038
May	4.290	2.252	2.038
June	4.290	2.252	2.038
July	4.130	2.168	1.962
Average, non tax period	----------	1.900	1.833

Year and month	Estimated net return per pound from sale of beet sugar (after deducting taxes and sales expenses) [1]	Estimated manufacturers' spread per pound excluding tax [2]	Estimated price per pound paid farmers [3]
1934	*Cents*	*Cents*	*Cents*
June	3.413	1.779	1.634
July	3.474	1.810	1.664
August	3.474	1.810	1.664
September	3.474	1.810	1.664
October	3.359	1.755	1.604
November	3.280	1.714	1.566
December	3.098	1.619	1.479
1935			
January	3.016	1.576	1.440
February	3.014	1.575	1.439
March	3.099	1.619	1.480
April	3.682	1.924	1.758
May	3.947	2.062	1.885
June	3.947	2.062	1.885
July	3.878	2.026	1.852
August	3.800	1.986	1.814
September	3.869	2.022	1.847
October	4.049	2.116	1.933
November	4.014	2.097	1.917
December	3.677	1.921	1.756
Average, tax period	----------	1.857	1.699

[1] Obtained by subtracting the crop-year average differences between the average net return from beet sugar and the net quoted price for cane sugar (New York) from the average net prices by months for refined cane sugar (New York).

[2] Obtained by multiplying the crop-year average percentages retained by manufacturers by the estimated monthly net returns (first column).

[3] Difference between items in first and second columns.

Source: Agricultural Adjustment Administration.